



100
CLASSICAL
ISLAMIC SOURCES

Ali J. Hussain



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Chicago

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DEDICATION

Part I of this volume is dedicated to my grandfather, Sayyid Muḥsin Sayyid ‘Alī al-Ḥusaynī al-Jalālī (1330-1396 AH/1912-1976 CE), in whose lap I sat as a child, before the age at which memories are formed, but whom I have otherwise never met. Indeed, to God we belong, and indeed, to Him we return.

Part II is dedicated to Dr. Heshmat Moayyad (84-175 BE/1927-2018 CE), consummate *adīb* of the highest caliber and multilingual literary master, whose love of *adabīyāt* knew no bounds. May he bask forever in the Realm of Light.

Part III is dedicated to Walter A. Sherrill (1938-1995), who taught chemistry and physical sciences in the Chicago Public Schools system, declining greater wealth and fame at far more prestigious academic institutions to teach young fools such as myself. May he rest in eternal peace.

All three were teachers, and teachers of teachers. All three believed in the value of an individual, as evidenced by their incredible investment of time and energy in their students. I hope that this diminutive volume might constitute one grateful student’s miniscule contribution towards a return on their investment.

CONTENTS

Transliteration, Translation, and Other Notes	i
---	---

MAPS

1. Western Islamdom	vi
2. Central Islamdom.....	vii
3. Eastern Islamdom.....	viii
General Introduction	ix

I – RELIGIOUS SCIENCES

Introduction to Part I.....	3
-----------------------------	---

THE QUR'ĀN

1. <i>Al-Qur'ān</i>	7
---------------------------	---

VARIANT READINGS

2. Ibn Mujāhid's <i>al-Sab'ah fī al-qirā'āt</i>	11
---	----

EXEGESIS

3. Al-Ṭabarī's <i>Ḥāmi' al-bayān 'an ta'wīl al-Qur'ān</i>	14
4. Abū Ja'far al-Ṭūsī's <i>al-Tibyān fī tafsīr al-Qur'ān</i>	17
5. Al-Zamakhsharī's <i>al-Kashshāf 'an ḥaqā'iq al-tanzīl</i>	19
6. Al-Ṭabrisī's <i>Majma' al-bayān li-'ulūm al-Qur'ān</i>	21
7. Fakhr al-Dīn al-Rāzī's <i>Mafātīḥ al-ghayb</i>	23
8. Ibn al-'Arabī's <i>Tafsīr</i>	25
9. Al-Qurṭubī's <i>al-Ḥāmi' li-aḥkām al-Qur'ān</i>	28

HADĪTH

10. Mālik's <i>Muwatta'</i>	31
11. Al-Bukhārī's <i>Ṣaḥīḥ</i>	33
12. Muslim's <i>Ṣaḥīḥ</i>	35
13. Al-Kulaynī's <i>al-Kaḥfī</i>	37
14. Al-Qummi's <i>Man lā yahḍuruhu al-faqīh</i>	39

RIJĀL

15. Ibn Sa'd's <i>Kutāb al-tabaqāt al-kabīr</i>	41
16. Ibn Abī Ḥatīm al-Rāzī's <i>al-Jarḥ wa-al-ta'dīl</i>	43
17. Al-Ka'bi's <i>Qubūl al-akhbār wa-ma'rīfat al-rijāl</i>	45
18. Ibn Ḥibbān's <i>Tārīkh al-ṣaḥābah</i> <i>alladhīna ruwīya 'anhum al-akhbār</i>	47
19. Abū Ja'far al-Ṭūsī's <i>Rijāl</i>	49
20. Al-Mizzī's <i>Tahdhīb al-kamāl fī asmā' al-rijāl</i>	51

JURISPRUDENCE

21. Al-Shāfi'ī's <i>al-Risālah fī uṣūl al-fiqh</i>	54
22. Abū Ja'far al-Ṭūsī's <i>Uddat al-ʿuṣūl</i>	57
23. Al-Ghazālī's <i>al-Mustasfā fī ʿilm al-uṣūl</i>	59
24. Fakhr al-Dīn al-Rāzī's <i>al-Maḥṣūl fī ʿilm uṣūl al-fiqh</i>	62
25. Al-Āmidī's <i>al-Iḥkām fī uṣūl al-aḥkām</i>	64
26. Ibn al-Ḥājib's <i>al-Mukhtaṣar</i>	66

MYSTICISM

27. Al-Ḥākim al-Tirmidhī's <i>Bayān al-farq bayn al-ṣadr wa-al-qalb</i> ..	68
28. Al-Ghazālī's <i>Ihyā' ʿulūm al-dīn</i>	70
29. ʿAbd al-Qādir al-Jīlānī's <i>al-Ghunyah li-tṭalibī tarīq al-ḥaqq</i>	72
30. Al-Suhrawardī's <i>ʿAwārif al-maʿārif</i>	74
31. Ibn al-ʿArabī's <i>al-Futūḥāt al-makkīyah</i>	77

THEOLOGY

32. Abū al-Ḥasan al-Ash‘arī’s <i>Kitāb al-luma‘ fī al-radd ‘alā ahl al-zaygh wa-al-bida‘</i>	79
33. Abū Ja‘far al-Tūsī’s <i>Kitāb al-khilāf</i>	82
34. Ibn Hazm’s <i>al-Fiṣal wa-al-mīlal</i>	85

II – ADAB

Introduction to Part II	93
-------------------------------	----

LANGUAGE AND LINGUISTICS

35. Sībawayhi’s <i>al-Kitāb</i>	97
36. Ibn al-Sikkīt’s <i>Iṣlāḥ al-manṭiq</i>	99
37. Ibn Durayd’s <i>al-Ḥamharah fī al-lughah</i>	101
38. Ibn Jinnī’s <i>Sirr al-ṣanā‘ah wa-asrār al-balāghah</i>	103
39. Ibn Manẓūr’s <i>Lisān al-‘arab</i>	105
40. Al-Jāḥiẓ’s <i>al-Bayān wa-al-tabyīn</i>	107

LITERATURE

41. Ibn Qutaybah’s <i>‘Uyūn al-akhbār</i>	110
42. Al-Bayhaqī’s <i>al-Maḥāsīn wa-al-masāwīr</i>	112
43. Ibn ‘Abd Rabbih’s <i>al-Iqd al-farīd</i>	114
44. Abū al-Faraj al-Isfahānī’s <i>Kitāb al-aghānī</i>	116
45. Al-Tanūkhī’s <i>al-Faraj ba‘d al-shiddah</i>	118
46. Al-Tha‘ālibī’s <i>Ṭatīmat al-dahr fī maḥāsīn ahl al-‘aṣr</i>	120
47. Al-Ṣābī’s <i>Rusūm dār al-khilāfah</i>	123
48. Al-Rāghib al-Iṣfahānī’s <i>Muḥāḍarat al-udabā’</i>	126
49. Al-Ḥarīrī’s <i>Maqāmāt</i>	128
50. Al-Zamakhsharī’s <i>Rabī‘ al-abrār</i>	130
51. Ḍiyyā’ al-Dīn ibn al-‘Athīr’s <i>al-Mathal al-sā‘ir</i>	132

POETRY

52. The <i>Dīwān</i> of Abū Nūwās	135
53. Ibn al-Mu‘tazz’s <i>Kitāb al-badī‘</i>	138
54. The <i>Dīwān</i> of al-Mutanabbī	141
55. The <i>Dīwān</i> of Abū Firās al-Ḥamdānī	144
56. Al-Ma‘arrī’s <i>Luzūm mā lam yalzam</i>	146

BIBLIOGRAPHICAL INDEXES

57. The <i>Fihrist</i> of Ibn al-Nadīm	149
58. The <i>Fihrist</i> of al-Ṭūsī	151
59. The <i>Fihrist</i> of al-Ishbīlī	153

HISTORIES

60. Ibn Ishāq’s <i>Sīrat rasūl Allāh</i>	155
61. Al-Wāqidi’s <i>Kitāb al-maghāzī</i>	157
62. Al-Balādhurī’s <i>Futūḥ al-buldān</i>	160
63. Al-Ya‘qūbī’s <i>Tārīkh</i>	162
64. Al-Ṭabarī’s <i>Tārīkh al-rusul wa-al-mulūk</i>	165
65. Al-Mas‘ūdī’s <i>Murūj al-dhahab</i>	167
66. ‘Izz al-Dīn ibn al-Athīr’s <i>al-Kāmil fī al-tārīkh</i>	170
67. Ibn Khaldūn’s <i>Kitāb al-‘ibar</i>	172

III – FALSAFAH

Introduction to Part III	179
--------------------------------	-----

PHILOSOPHY

68. Al-Kindī’s <i>al-Falsafah al-ūlā</i>	187
69. Al-Fārābī’s <i>Ārā’ ahl al-madīnah al-fāḍilah</i>	190
70. Ibn Sīnā’s <i>Kitāb al-shifā’</i>	193
71. Ibn Ṭufayl’s <i>Risālat Ḥayy ibn Yaqẓān</i>	196
72. Ibn Rushd’s <i>Tahāfut al-tahāfut</i>	199
73. Ibn Maymūn’s <i>Dalālat al-ḥā’irīn</i>	203

MEDICINE & MATERIA MEDICA

74. ‘Alī ibn al-‘Abbās al-Majūsī’s <i>al-Kāmil fī al-ṣinā‘ah al-ṭibbiyah</i>	207
75. Abū al-Qāsim al-Zahrāwī’s <i>al-Taṣrīf li-man ‘ajīza ‘an al-ta‘rīf</i>	212
76. Ibn Sīnā’s <i>al-Qānūn fī al-ṭibb</i>	215
77. ‘Alī ibn ‘Īsā’s <i>Tadhkirat al-kaḥḥālīn</i>	218
78. Ibn Zuhīr’s <i>al-Taysīr fī al-mudāwāh wa-al-tadbīr</i>	220
79. Al-Isrā‘īlī’s <i>Kūtāb al-aqhdhiyah wa-al-adwiyah</i>	223
80. Ibn al-Bayṭār’s <i>al-Jāmi‘ li-mufradāt al-adwiyah wa-al-aqhdhiyah</i>	225

AGRICULTURE & HIPPOLOGY

81. Ibn al-‘Awwām’s <i>Kūtāb al-Filāḥah</i>	228
82. Ibn Hudhayl’s <i>Ḥilyat al-fursān</i>	231

CHEMISTRY

83. Jābir ibn Ḥayyān’s <i>Hakk al-astār</i>	234
84. Ibn Zakarīyā al-Rāzī’s <i>Kūtāb al-asrār</i>	238

PHYSICS & ENGINEERING

85. Ibn al-Haytham’s <i>Kūtāb al-manāẓir</i>	242
86. Al-Khāzinī’s <i>Mīzān al-ḥikmah</i>	245
87. Al-Jazarī’s <i>Kūtāb al-ḥiyal al-handasiyah</i>	248

MATHEMATICS

88. Al-Uqlīdisī’s <i>al-Fuṣūl fī al-ḥisāb al-hindī</i>	251
89. Al-Khwārazmī’s <i>Kūtāb al-jabr wa-al-muqābalah</i>	254
90. Al-Būzajānī’s <i>Mā yaḥtāju ilayhi al-ṣāni‘ min ‘ilm al-handasah</i>	257
91. Al-Karajī’s <i>al-Kāfī fī ‘ilm al-ḥisāb</i>	260

ASTRONOMY

92. Al-Farghānī's <i>Kitāb jawāmi' 'ilm al-nujūm</i>	263
93. Al-Battānī's <i>al-Ẓij al-Ṣābi</i>	266
94. 'Umar al-Khayyām's <i>al-Jabr wa-al-muqābalaḥ</i> and <i>the Jalālī Calendar</i>	269
95. Naṣīr al-Dīn al-Ṭūsī's <i>Tadhkirah fī 'ilm al-hay'ah</i>	273

GEOGRAPHY

96. Al-Ya'qūbī's <i>Kitāb al-buldān</i>	277
97. Al-Muqaddisī's <i>Aḥsan al-taqāsīm fī ma'rifaṭ al-aqālīm</i>	279
98. Al-Idrīsī's <i>Nuzhat al-mushtāq fī ikhtirāq al-āfāq</i>	282
99. Al-Bīrūnī's <i>Mas'ūd qānūn</i>	285
100. Yāqūt al-Rūmī's <i>Muḥjam al-buldān</i>	289

Abbreviations for Frequently Cited Sources	291
--	-----

Notes	293
-------------	-----

TRANSLITERATION, TRANSLATION, AND OTHER NOTES

Transliteration follows the Library of Congress Arabic romanization system, the only modification being transliteration of qur'ānic text, which is fully vocalized except for the pausal ending. Transliteration of Arabic in quoted materials and published titles is maintained as in the original. Geographic locations that are relatively common in modern English are not transliterated. Thus, Mecca, Medinah, Cairo, and Baghdad, rather than “Makkah” or “al-Qāhirah.” Mosul is included in this category as recent events have placed it in the English language headlines and made it relatively more common. Arabic place names less commonly known in English, e.g., Baṣrah, Kūfah, Ṭūs, Jilān, etc., are transliterated. Arabic geographic adjectives are not capitalized (e.g., *makkīyah*). Archaic anglicized *nisbah* adjectives with endings such as “-ite” and “-id” are consistently abandoned for the more modern, and more accurate, transliterated versions. Thus, Sunnī and Shī'ī are used rather than “Sunnite” and “Shi'ite,” ‘Abbāsī and Ayyūbī are used rather than “‘Abbāsīd” and “Ayyūbid.” The term “Islamic law” is used in place of *sharī'ah*.

The noun Qur'ān is capitalized but the adjective qur'ānic is not. For simplicity and consistency, all references to qur'ānic citations are given in (Q chapter: verse) format. Qur'ānic verses are neither quoted nor translated in their entirety. Instead, I provide transliteration of the word or phrase in question or an English translation of the specific subject, or both, along with a qur'ānic citation. Readers are thereby able to locate precisely the qur'ānic text referenced, in its context, in any printed edition or any English language translation of their choice. All qur'ānic translations and citations are given according to the common Ḥafṣ ‘an ‘Āṣim variant of most published Qur'āns today.

Other than quotations or works cited, all Arabic translations, including terminology and titles of works mentioned in the text, are mine. Arabic book titles are translated only on their first occurrence within each entry. For Arabic technical terms repeated frequently, every effort is made to translate them into English only on the occasion of their first occurrence. Exceptions are made when the last appearance of the term (along with its translation) was at a significant enough interval to merit repeating the translation. Classical Arabic book titles are often elaborate, with flowery language and rhyme schemes that become cumbersome and awkward when translated. Every effort at translation calls for balancing between literal and idiomatic meanings. When at an impasse, I prefer leaning towards the literal, as it leaves the reader with some of the flavor of the original language. The aftertaste is, of course, a personal preference, just as some prefer the bitterness of a dark stout or a raw, first-press olive oil. If nothing else, it serves as a reminder of the original, a reminder that what is being read is a translation, and thereby also a reminder that something is always lost in translation. Implied words or phrases are in brackets for clarity.

Copious endnotes provide abundant bibliographic and other details. A complete bibliography of works cited would be so lengthy that it would require a separate volume. The nature of this work, itself a sort of bibliographic index, makes a separate bibliography redundant and unnecessary. Similarly, since the classical sources are numbered from one to one hundred, and since each entry is brief, interrelated authors, subjects, and geographic locations are internally referenced by source number rather than adding an index of key words by page number.

Numbers greater than three digits, ordinal numbers used for dates and centuries, and those designated by “#” or “%” are written numerically. Internal references to related material outside of a given entry are noted parenthetically with author’s name and entry number (e.g., see al-Jāhīz, #40). Dates are provided in both Hijrī and Julian format throughout, until the year 897/1492, after which they are provided only in the Julian and Gregorian of the common era.

Reigns are provided only for actual dynastic rulers. All others, including local governors, ministers, or ‘de facto’ rulers behind the throne are identified with date of death.

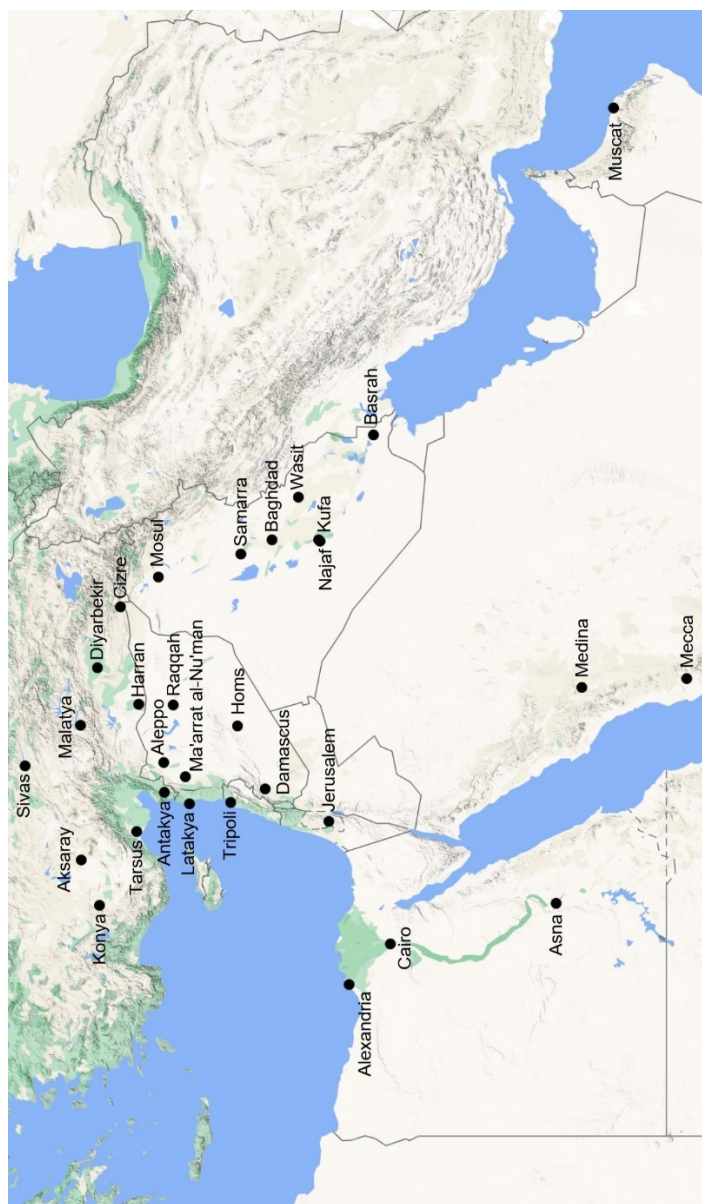
I note the modern names and locations of cities and villages immediately after their initial mention within the text. I identified, mapped, and labeled the cities mentioned throughout this work using a number of freely available open-source online tools, then combined the results into three individual map images, one each for western, central, and eastern Islamdom. Some cities are now within the borders of nations that did not exist a thousand years ago, while others were important population centers in earlier times, but are now uninhabited archeological sites. These maps bear the modern names of the historical cities.

I use the term ‘Islamic’ in its broadest sense, referring to any product of the multi-ethnic, multi-religious melting pot of Islamic civilization, which spanned most of the known world at the time. The term is just as applicable to works of Islamic religious sciences as it is to a treatise on mathematics, or chemistry, or art, and just as applicable to the writings of a Muslim religious scholar as to the writings of a non-Muslim, or even an agnostic or atheist. In this vein, this volume includes works authored by a blasphemous ‘false prophet’ and poet in 4th/10th century Syria, a Christian ophthalmologist in 5th/11th century Iraq, a Sephardic Rabbi in 6th/12th century Egypt, and many other luminaries who were simultaneously products of, and contributors to, the literary fluorecence of Islamic civilization.

MAPS

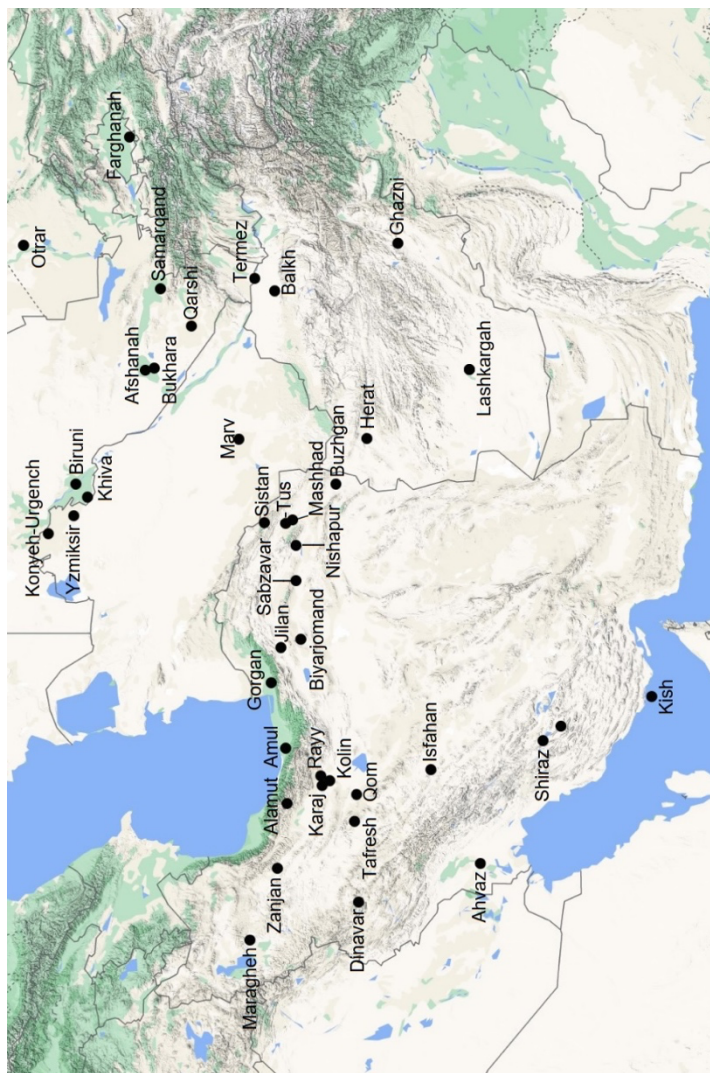
WESTERN ISLAMDOM





CENTRAL ISLAMDOM

EASTERN ISLAMDOM



GENERAL INTRODUCTION

This is not a work of original research. Nor does it claim to be. Nearly all the information contained herein is available in other sources. The main aim of this work is to collect, collate, synthesize, summarize, and organize the information from those disparate scattered sources into a representative and easily accessible whole. In a sense, this work shares many characteristics with some of the classical Arabic literary compilations it describes. Yet, it diverges from those texts in that another aim of this work is to make available the sum of all that information in a single concise, easily accessible volume. Various elegant introductions to Arabic literature are already available, as are comprehensive literary bibliographies and indexes, but the former generally tend to sacrifice depth for breadth, and the latter tend to be too detailed and voluminous for the general reader. Additionally, many such works evidence a natural but nonetheless unfortunate bias in defining 'literature' as belonging to what modern academia categorizes as 'the humanities,' thereby marginalizing, if not neglecting altogether, the significant contributions of Arabic scientific writings to the literary corpus of human civilization. The final aim of this work is to maintain the broad civilizational perspective evident in some of the greatest examples of the above-mentioned works that are already available. Unfortunately, the Goldziher and the Brockelmanns of this world are no more and, with the increasing trend of hyper-specialization in academia over the past century or more, we will not likely see their ilk again.

Such a broad perspective is useful not only for general readers and introductory students, but also, precisely because of its breadth, becomes a useful resource for specialist scholars. The scholar specializing in Arabic literature may find this presentation of those sources to be too rudimentary, but is unlikely to be equally familiar with the classical Arabic sources on medicine, pharmacy, mathematics, or engineering. Similarly, the scholar specializing in the history of science and medicine will not likely be as familiar with the foundational

sources in Islamic exegesis and jurisprudence that heavily influenced the worldviews of both Muslim and non-Muslim scientists and physicians in Islamic civilization. As such, a concise handbook such as this serves to inform a wide audience in a way that many currently available publications do not.

This work is organized into three sections, reflecting the three main intellectual trends of Islamic civilization. The first is devoted to religious and spiritual texts, the second to non-religious (but not necessarily irreligious) literature and *belles-lettres*, and the third to philosophical and scientific literature. Each section comprises thirty-three entries that, along with the initial entry on the Qur'ān, total one hundred classical sources of Islamic civilization. Within each section, works are grouped together into sub-categories (for example, exegetical works, poetry collections, or works on astronomy) and within each subcategory, works are presented in chronological order by death date of the author. Each entry consists of a brief, usually single paragraph summary of basic biographical information on the author. This paragraph is a synthesis of information from often lengthy, detailed entries in the Encyclopedia of Islam and supplemental information gathered from other sources, all of which are indicated in a reference at the end of the biographical summary. Place names are listed according to the classical nomenclature of the author's time and, at the first mention within each entry, by their modern names and locations in parentheses. The reason for their repetition in subsequent entries is two-fold. Primarily, it gives the uninitiated reader a better sense of the region's pre-modern configuration prior to the delineation of modern borders. This is especially useful considering many classical scholars' penchant for 'traveling in search of knowledge.' Secondly, it serves the reader using this volume as a handy reference to search isolated entries as needed rather than reading all entries consecutively. The only exception to parenthetical citation of a city's modern location is Baghdad, which has, in recent times, come to be well-known as the capital of modern Iraq. No modern equivalents are mentioned for generalized geographic names from the classical period, such as "the Yemen," "Egypt," or "Arabia." For personal names, use of the full

name-complex of authors is avoided. The authors' names in their complete classical forms are already well-known to specialists and are of little benefit to the general reader. Whenever possible, the traditional lengthy Arabic names of authors introduced in their biographies have been simplified to a modified *thulāthī* (given name, father's name, grandfather's name) and a *nisbah* (adjectival attribution) or some variation thereof that is limited to no more than four components. Within the text, individuals' death dates or reigns are provided, with the exception of the ancients (Aristotle, Plato, etc.).

The brief biography is followed by another few paragraphs on the work and its significance to the literary corpus of human civilization, with special attention to its relevance to the European Renaissance and, subsequently, to our modern world. As most of the entries are well-known classical Arabic sources and the aim of this volume is to highlight the existence and importance of these works, an exhaustive listing of every Arabic language edition available is not provided. I aim to list just a few representative publications. Seasoned scholars are well aware of the published editions available in their respective specialties and such an exhaustive listing is of little use to the novice. Every effort has been made, however, to list as many complete English language translations as possible. When little or none of the author's work has been translated in its entirety, every attempt is made to cite partial translations of significant length. However, translated excerpts are not always cited when complete translations are available that permit the English reader to gain a fair sense of the author's intellectual contributions in their complete form. When no translations are available, I draw attention to that fact in the hopes that those gaps might be filled by the next generation of scholars. Editions are listed in reverse chronological order by publication date. As such, the first listed may not necessarily be the best critical text edition but a more accessible commercial trade edition. As much as possible, concision is maintained within the text of each entry and references are provided in endnotes for the serious reader interested in pursuing the subject further.

The impossibility of limiting within each section the vast corpus of thousands of classical Arabic sources to only thirty-three entries

cannot be overstated. Methodologically, inclusion criteria consisted of both subjective and objective parameters. Objectively, only extant sources were included among potential entries. Unlike the clay tablets of ancient civilizations, paper books were far more susceptible to the ravages of time. We know of numerous classical works that have not survived, only through artifactual references and selected quotations in surviving sources. These are therefore excluded. An additional inclusion criterion is that the extant work be published. This need not be a critical text edition or even a print edition, as even a manuscript facsimile qualifies. But the text must be in published form, and therefore available for the seriously interested reader. An additional criterion is that the text be complete in a relative sense. Even if the original text has not survived in its entirety or has not been published in its entirety, the surviving published portion may be an independent chapter of a larger, perhaps encyclopedic text, and the chapter itself may be complete. Examples are al-Kindī's chapter on philosophy (#68) and al-Zahrāwī's chapter on surgery (#75), both of which are surviving fragments of larger works, but which function as complete independent texts and which have made their impact felt on the history of human civilization. Conversely, the exclusion of the surviving fragment of al-Ṭabarī's *Ikhtilāf al-fuqahā'* is based on the importance of the whole work as a comprehensive legal reference and the availability of other similar classical works on the subject that have survived in their entirety (see al-Ṭūsī's *Khilāf*, #33). Also, there is an appreciable difference between a surviving fragment of a text the majority of which is missing, and a text the majority of which survives but with a fragment missing, such as the truncated third chapter of al-Ya'qūbī's *Kitāb al-buldān* (see #96). To be included a work must also have authorial attribution. As such, Jābir ibn Ḥayyān has been included, but the group of anonymous authors, al-Ikhwān al-Ṣafā, has not, in spite of scholarly debates on the questionable historical authenticity of the former and in spite of the tremendous intellectual impact of the latter. Finally, a terminal limit of the 9th/15th century has been set as an inclusion criterion. More specifically, I have chosen Rabī' al-Awwal 2nd, 897/January 2nd, 1492. This was the day Muḥammad XII of Granada surrendered to

Castilian forces, ending the Granada wars of Queen Isabella of Castile and King Ferdinand of Aragon. It marks both the end of the policy of *convivencia* (live and let live) and the beginning of militant Christianization of the Iberian Peninsula. It also marks a redirection of European focus, the beginning of the transatlantic adventures of Christopher Columbus and others, the rise of European colonialism, and the beginning of a new world order.

More subjectively, preference was given to earlier works rather than those of even this late date, with only two entries from the 7th/14th century and only one from the first decade of the 8th/15th century. Every effort was made to limit entries within each category to no more than one per century, unless exceptions were unavoidable due to periods of unusual literary fluorescence or to offer a range of differing views during a formative period. Selections were also deliberate in attempting to illustrate the intellectual diversity of the literary corpus with entries that represent each of the major trends in Islamic civilization. In theological orientation, works are included of both the Mu'tazilī scholars who believed in a rational God and rational religion, as well as the Ash'arī scholars who believed that human reason could not be applied to God's judgements and commandments. In selecting examples of religious texts such as exegetical works or sources of Islamic law, exemplary texts of both Sunnī and Shī'ī scholars have been included, as have works of both orthodox traditionalists and of mystical Ṣūfis. Some intellectual luminaries were exceptional polymaths, what are now called 'Renaissance men,' but centuries before Europe's Renaissance, and their works are found in multiple sections throughout. For example, two of al-Ṭabarī's famous works are listed: one in qur'ānic exegesis (#3) and another in history (#64). Similar patterns are evident for other notable figures such as al-Ghazālī (#s 23, 28), al-Ya'qūbī (#s 63, 96), and Fakhr al-Dīn al-Rāzī (#s 7, 24). Among the minority community, Abū Ja'far al-Ṭūsī's works (#s 4, 19, 22, 58) were so monumental and transformational in the development of Shī'ī thought that when searching for exemplary representative works in a variety of sections, his name inevitably rises above those of other Shī'ī scholars active in the classical period. While none of the entries

included were authored by women, there is mention of two women having been teachers to one of the authors mentioned (see Ibn al-‘Arabī, #8). It is an unfortunate fact of history that the tremendous contributions of women teachers, scholars, and writers have not been given widespread enough recognition in early Islamic history, where the male students of female teachers became more famous than the women who taught them! I sincerely hope that this volume encourages a new generation of girls to carry on the intellectual traditions of those amazing women who came before them.

In spite of my efforts to distribute these varied intellectual trends in a manner representing, as much as possible, the broad diversity of literary tradition in Islamic civilization, the endeavor remains one that is inherently subjective. One can be certain that a hundred different scholars tasked with formulating a list of the one hundred most important texts of Islamic civilization will submit one hundred different lists. From this project’s inception, it has not been lost on me just how formidable the task is of attempting to distill into a single small tome nearly eight centuries of the voluminous religious, literary, and scientific heritage of a vast multiethnic civilization that spanned most of the known world at the time. Even limiting the project to Arabic texts and excluding the rich literary heritage of Persian, Turkish, and other languages, it remains an impossible task worthy of the attention of hundreds of specialist scholars and graduate assistants at dozens of universities across multiple continents. The following pages are nothing more than a single scholar’s humble attempt at the impossible. It is my sincere hope that the scholarly community will bring to my attention any errata and suggestions for an improved second edition.

For any aspect of this work worthy of praise, credit belongs to my teachers who trained me and to theirs who trained them. The responsibility for any of its flaws is no one’s but my own.

Ali J. Hussain
Chicago, 1438/2017

I

RELIGIOUS
SCIENCES

INTRODUCTION TO PART I

This first section deals with the classical sources of religious and spiritual thought in Islamic civilization. As such, we begin at the beginning, with the text which, according to Muslims, represents the very essence of Islam: the Qur'ān. Most members of non-Muslim societies tend to believe that the Qur'ān plays, in Muslim society, the equivalent role of the Bible in Christian society. While such a supposition is natural, it is not entirely correct. The brief overview provided of the history, content, and style of the Qur'ān will help to explain its reception in the Muslim world and subsequent influence on Islamic religious, literary, and scientific culture. After the Qur'ān, our first entry is the first major work on variant readings of the Qur'ān, the widespread acceptance of which marked the next stage in the evolutionary interplay between the orally recited Qur'ān and the written text, a centuries-long development that has resulted in the Qur'āns of today.

The next eight entries are *tafsīrs*, major works of qur'ānic exegesis representing various perspectives in intellectual thought through the course of the evolution of Islamic civilization. Nothing serves as more powerful 'proof' of any controversial political or theological position than the Word of God. It should come as no surprise that the Qur'ān, like every other scriptural text before and after it, has been interpreted, manipulated, used, and abused by numerous factions to 'prove' their positions valid and those of their opponents false. Sometimes the same verse can be used by different interpreters to 'prove' entirely opposing views. And there has never been a shortage of controversial views to legitimize. From free will and predestination, to sectarian differences on leadership and succession, to theological matters of ritual purity, prayer and fasting, to the nature of creation itself, an exegete's interpretation of scripture often tells us more about the interpreter's perspective than it does

about the scripture upon which it is commenting. Included are Sunnī *akhbārī*, Sunnī traditionist, Sunnī Mu‘tazilī, Sunnī anti-Mu‘tazilī, Sunnī Andalusian, Shī‘ī, and Ṣūfī works that were not only major works in their own time, but that have made lasting impacts felt to this day.¹ Along with a brief explanation of each author’s methodological contribution, at least one example is included for each entry to help provide the reader a very brief glimpse of the author’s interpretive stance.

Second only to the Qur’ān in religious importance are the *ḥadīths*. The word *ḥadīth* (literally translated as “narrative” or “speech”), as a technical term refers to sayings attributed to the Prophet Muḥammad or reports of his actions. In the decades and centuries after his death, as Islam spread geographically and temporally farther from the Arabia of Muḥammad’s lifetime, new generations of Muslims began to seek information regarding the words and deeds of their prophet. This was not only a matter of interest or curiosity. While the Qur’ān does mention many of the most basic aspects of Islamic law, with time, many legal and theological questions arose that were not specifically answered by the Qur’ān. Since Muslims believed that no one was able to understand the essence of God’s revelation better than the one to whom it was revealed, they began to look to the practice of the Prophet for answers. Eventually, scholars began to compile written collections of the things he said or did, transmitted orally from generation to generation. With time, conflicting and sometimes even contradictory reports accumulated. Reports were even fabricated to support the views of a particular political, tribal, or sectarian group. An understanding of the transmitters of the information came to be seen as important in determining the authenticity of any alleged saying of Muḥammad. Several scholars began to compile authoritative collections that they determined to be *ṣaḥīḥ* (“authentic,” having a reliable chain of transmitters). Among the many such sources, today’s Sunnī scholars consider the *ṣiḥāḥ al-sittah* (the Six [Authentic] Sources) to be the foundational *ḥadīth* sources of their schools of thought and Shī‘ī scholars consider the *kutub al-arba‘ah* (the Four Books) to be the foundational *ḥadīth*

sources of theirs. Half of each (three of the six canonical Sunnī sources and two of the four canonical Shīʿī sources) have been included as entries on our list.

A closely related discipline is that of *rijāl* (the study of biography). It is also referred to as *al-jarḥ wa-al-taʿdīl* (condemning as unreliable and confirming reliability). As the science of *ḥadīth* evolved into a discipline, authenticating the chains of transmission of any reported quotation or anecdote reported became essential. The biographical details of each person in the chain of individuals who claimed to have heard Muḥammad were scrutinized to determine if the individuals were contemporaneous or lived generations apart, if their physical contact was possible or if they were never in the same city, if they lived righteous and pious lives or if they had less than reliable reputations. Many generations had already passed after the death of Muḥammad by the time *ḥadīth* scholars began to compile the now canonical works. As a result, a great deal of sifting through biographical records was necessary and scholars began to devote considerable time and effort to gathering biographical data. This vast endeavor has resulted in an entire genre of literature unto itself. No other civilization has developed a fascination with literary biography quite to the extent that is evidenced in Islamic civilization. Countless biographical dictionaries were composed, both the universal variety and those that are thematically focused. For example, Muḥammad ibn Ḥārith al-Khūshānī's (361/971) *Akhbār al-fuqahā' wa-al-muḥaddithīn* ("The Reports of the Jurisprudents and the Ḥadīth Transmitters"), al-Khaṭīb al-Baghdādī's (d. 463/1071) *Tārīkh Baghdād* ("The History of Baghdad"), and Ibn 'Asākir's (d. 571/1173) *Tārīkh madīnat Dimashq* ("The History of the City of Damascus"), are all very important works dealing specifically with biographies of individuals in Andalusia, Baghdad, and Damascus, respectively. Numerous other types of biographical dictionaries were compiled, focusing on particular cities, geographic regions, tribes, professions, schools of thought, etc. Included here is a sampling of some of the most important comprehensive classical works, especially those used

specifically for evaluation of *ḥadīth* transmission and upon which later, more expansive works were based.

With the expansion of Islam and increasing demands of the administrative state, the evolution of Islamic law was inevitable. The early (secular) state readily adopted local administrative and legal frameworks, but religious leaders legitimated or denounced the practices of ruling caliphs and governors, citing verses of the Qur'ān or the *ḥadīths* of the Prophet as evidence of what is permissible or forbidden by God. While all Muslims agreed on the primacy of the Qur'ān, different schools of thought began to develop, each with its own interpretations of legal issues unanswered by scripture. Some placed heavier emphasis on the traditions of early Muslims as reflective of the practice of the Prophet, others placed more emphasis on the orally transmitted *ḥadīths* as a more authentic reflection of the Prophet's practice, and yet others applied personal judicial opinions. We have included as entries several major juridical works, including the major source that systematized the approach to law for the Sunnī community as well as the source that systematized the approach for the Shī'ī community, among others.

These legalistic texts are followed by five major (Sunnī) sources of the Ṣūfī tradition in Islam, representing originally a tradition of experiential spirituality contrary to strictly literal legalism. Over the course of the centuries, aspects of this mystical tradition blended successfully with religious tradition and eventually gained tremendous popularity, finally being deeply embedded into Islamic society, especially in North Africa, the Eastern Islamic lands and in India. And, while the Shī'ī scholarly community incorporated 'logic' into their theological approaches at a very early stage, it was also in these later centuries that Aristotelian logic began to be incorporated into Sunnī theology as well. This section on religion and spirituality concludes with the seminal text that popularized the adoption of logical argumentation against the logicians, a text on comparative law between the various Islamic schools of thought and finally, and a work on comparative theology in a broad sense, including religious traditions other than Islam.

1

AL-QUR'ĀN

(*“The Recitation”*)

Muslims believe the Qur'ān to be the literal word of God. This is unlike the traditional Christian view of the Bible as the ‘inspired’ word of God transcribed by individual apostles years after Jesus. The details of Muḥammad’s biography, with which the revelation of the Qur'ān is intimately connected, are available in numerous other sources (see, for example, Ibn Ishāq, #60) and the reader is encouraged to pursue those details if interested. For our purposes, the following is a brief summary² of the traditional Muslim view of the Qur'ān. At approximately forty years of age, Muḥammad began to hear and see the angel Gabriel, who was sent by God to relay His words verbatim. These words were spoken by Gabriel to Muḥammad, along with God’s instructions to ‘recite’ this message. These revelations sometimes consisted of only a few words, while at other times they formed lengthy passages. Muḥammad recited these messages publicly to his community. Despite stiff resistance by the pagans of Mecca (modern Saudi Arabia) and subsequent violence, torture, and murder of some of his earliest followers, and even despite an attempt to assassinate Muḥammad himself, he continued to preach the revelations. He slowly attracted a small, but increasing, number of followers who memorized the words of the Qur'ān. Some who were literate wrote the words on whatever materials were available: animal hides, palm leaves, pieces of wood, or flat bones

such as the shoulder blades of camels. Muḥammad escaped the first assassination attempt and this process of gradual revelation continued over the course of the next eleven years until the revelations were complete, ending with instructions on how to arrange the whole. During the next twenty years after Muḥammad's death, the caliphs who led the new community of believers gathered the various individual transcriptions and compiled the complete text into a single transcription, copies of which were sent to regions where Islam had spread outside of Arabia. This is the traditional Muslim view of the origins of today's qur'ānic text. In the 19th and 20th centuries, Western scholars of Islam published detailed analyses of the textual history of the Qur'ān questioning the traditional Muslim narrative and dating the compilation of the text to as late as two centuries after Muḥammad's death. Those seriously interested in pursuing modern scholarly research on the Qur'ān must familiarize themselves with these works.³

Regardless of whether the textual origins of the Qur'ān can be dated to Muḥammad's lifetime or centuries after his death, this brief history is enough to highlight one of the main differences between the Qur'ān and the Bible. As even the names indicate, the Qur'ān (Arabic, "recitation") appears never to have been viewed by the Muslim community primarily as a book. God's words recited to Muḥammad were recited by Muḥammad to his community, recited by him and his followers in their daily prayers, selections recited on various social occasions such as weddings and funerals, and the entire Qur'ān recited from beginning to end during special prayers during the month of Ramaḍān. Throughout the past fourteen centuries it has been recited in the original Arabic, and to this day, certain Muslims (*huffāz*, memorizers) take it upon themselves to memorize the Qur'ān in its entirety by recitation. Even the Arabic term for memorization of the Qur'ān, *hifz*, implies protection and preservation. It is almost as if the written text was just an afterthought. This is in stark contrast to the word Bible (from Greek *biblia*, "books") indicating that, from its very origins, the Christian Bible was a written work. Its 'books' were written down by the apostles, re-written by

copyists, transmitted by the early Christians in writing, and compiled by later Christians into a single volume of text. To this day, Christian communities generally view the Bible as a book, intended to be read. With the exception of those familiar with Greek, Aramaic, and biblical Hebrew, it is frequently read in translation.

The Qur'ān also differs in content and style from what one exposed to Western literature might expect from a book. Translation into Western languages only further removes the reader from the emotional depth and lyrical flow of the original Arabic Qur'ān. Much of the Arabic text is in rhymed prose and most of the over 6,000 verses consist of general exhortations to do good and to avoid evil, references to naturalistic imagery of the signs of God's creation, and promises of heavenly gardens and fiery hell. A very small proportion constitutes specific, legalistic injunctions. The stories of biblical prophets are retold in their qur'ānic versions with an emphasis on piety and Abrahamic monotheism and, ironically, the story of Mary as told in the Qur'ān includes greater detail on the immaculate conception of Jesus than exists in the Christian Bible. In fact, there is no actual description of the immaculate conception of Jesus anywhere in the Bible. Only two verses (Matthew 1:25 and Luke 2:7) mention the birth of Jesus at all, and they do so almost in passing. The exquisite detail of the qur'ānic description of Mary's physical and psychological trauma during the birth of Jesus (Q 19:16-34) stands out in stark contrast to the insipid biblical treatment of the event as almost an afterthought. In the Qur'ān, however, the miraculous birth of Jesus is one of God's most magnificent miracles, and the Qur'ān describes Mary's profound suffering and psychological turmoil with a lyrical beauty and emotional intensity that is unmatched in any other work of literature.

Such a rare confluence of spiritual content and poetic style has earned the Qur'ān a unique place in the corpus of the Arabic language and, indeed, in world literature. Bearing in mind that the people of Arabia during Muḥammad's lifetime had a largely pre-literate, oral culture, one of the most significant contributions of the

Qur'ān to world history is the fact that it spawned the literary, philosophical, and scientific intellectual explosion that is the focus of this current volume. Not only did the Qur'ān help to transform a largely oral culture into a highly literate one, but the Qur'ān's emphasis on exercising one's critical faculties made what we now call 'science' a religious obligation for every believer. No other scripture, of any spiritual tradition, places such heavy emphasis, so repeatedly and so frequently, on thoughtful reasoning, on criticism of blind faith, on questioning established dogma, and on striving in the pursuit of evidence, truth, and facts, regardless of 'the traditions of our forefathers.' This divine commandment to intellectual activity, combined with the spread of Islam out of the Arabian desert into the surrounding civilizations and the arrival of paper-making technology from China, spawned a literary explosion the likes of which human civilization had not seen for centuries prior, and which would set the stage for the European Renaissance centuries later.

At the beginning of all this was the recited Qur'ān.⁴

2

IBN MUJĀHID'S
AL-SAB‘AH FĪ AL-QIRĀ’ĀT
(“*The Seven Variant Readings*”)

For the early Muslim community, the oral nature of the Qur’ān and the fact that only a few literate Muslims had partial written fragments meant that its transmission from one person to another was generally by rote memorization. With time, variations developed. According to the traditional Muslim view, the third caliph after Muḥammad’s death, ‘Uthmān ibn ‘Affān (r. 23-35/644-656), attempted to remedy the situation by compiling the earliest written fragments of the orally recited Qur’ān into a single written text. The resultant standardized ‘Uthmānī text was then copied and distributed to the major cities of the caliphate. This helped to limit the wide variety of ways in which the Qur’ān was being recited. However, the Arabic script at the time was still at a primitive stage. Diacritical dots had not yet become standard in Arabic writing. Several letter groups, including the letters *b*, *t*, *th*, *n*, and *y* were all written using the same symbol. Consider, for example, that the English letters ‘*i*’ and ‘*l*’ would appear the same if they were not dotted or crossed. Additionally, short vowel markers had not yet been developed, further confusing the conjugations and tenses of verbs as well as the declension of nouns. Consider, for example, having to read this sentence without

vowels: “cnsdr, fr xmpl, hvng t rd ths sntnc wtht vwls.” All of this meant that, while the ‘Uthmānī standardization did effectively eliminate many recited versions of the Qur’ān by having a single official written Qur’ān, some variations were still possible since that primitive written text could still be read and recited in multiple ways. Numerous *ḥuffāz* (memorizers) who had memorized the Qur’ān and reportedly learned their pronunciation orally from teachers or who heard it directly from Muḥammad himself, continued to recite according to their *qirā’ah* (variant reading), regardless of the standardized primitive text.

Aḥmad ibn Mūsá ibn al-‘Abbās al-Tamīmī, (d. 324/936) known as Ibn Mujāhid, was born and raised in Baghdad and was known for his study and teaching of the *qirā’āt* (variant readings). Among his writings on the subject is his *al-Sab‘ah fī al-qirā’āt* (“The Seven Variant Readings”). In this work, he identifies seven of the many variant readings at the time as ‘acceptable’ and discounts all others as illegitimate. He was personally convinced of the need to limit the recitation of the Qur’ān to these seven variant readings and, after instigating state authorities, succeeded in banning readings that did not meet his approval. He succeeded also in making public examples of several of his contemporaries. Ibn Miqṣam (d. 354/965) was a fellow expert of *qirā’āt* and also of Arabic grammar. He recited a variant reading that matched the consonantal outline of the ‘Uthmānī text, but his recitation of the short vowels and placement of the diacritical dots did not match any of the seven readings chosen by Ibn Mujāhid. Ibn Miqṣam was summoned by the authorities in the year 322/934 and recanted at his trial. One year later, Ibn Shannabūdh (d. 329/939), another contemporaneous expert of *qirā’āt*, was summoned for reciting rare variants. He refused to recant at his trial and was flogged until finally he was convinced to comply.⁵ Enforcement of Ibn Mujāhid’s views by state authorities, combined with the publicized humiliation of dissenting experts appears to have had its intended effect. Many non-canonical *qirā’āt* disappeared from active use and survive today only in theory, as documented in specialized texts on the subject.⁶

About five centuries after Ibn Mujāhid another expert in *qirā'āt*, Muḥammad ibn Muḥammad ibn Muḥammad ibn al-Jazarī (d. 833/1429), and student of Ismā'īl ibn Kathīr (d. 774/1373), determined that three additional variants are also acceptable. Three centuries after that, another *qirā'āt* expert, Aḥmad ibn Muḥammad b Aḥmad al-Dimyāṭī (d. 1117/1705) expanded the field with an additional four variants. Despite the many theoretical variants, in practice, the overwhelming majority of today's published Qur'āns are in the reading of Ḥafṣ, as narrated from 'Āṣim and based on a 1924 official Egyptian publication.⁷ Many North African Qur'āns (excluding Egypt) are in the reading of Warsh, from Nāfi', and constitute a large minority of the world's Qur'āns. More rare published Qur'āns also exist in the readings of Qālūn from Nāfi' in North Africa and in Yemen, and Dūrī from Kisā'ī in parts of eastern and western Africa.⁸

3

AL-ṬABARĪ'S

ḤĀMI' AL-BAYĀN 'AN TA'WĪL AL-QUR'ĀN

(“*The Collection of Explanatory Interpretations
of the Qur’ān*”)

Muḥammad ibn Jarīr ibn Yazīd al-Ṭabarī (d. 310/923) was born to a moderately wealthy landed family in the town of Āmul (modern Iran), in the Ṭabaristān region near the southern coast of the Caspian Sea. As with most education in Islamic lands at the time, his early education began with memorizing the Qur’ān. He displayed early signs of his future greatness, having memorized the entire Qur’ān by age seven. By age twelve, he left home ‘in search of knowledge,’ first to the regional center of Rayy for his educational foundation, then, by age seventeen, to the intellectual center of the Islamic world at the time, Baghdad. While there, he sought scholars and teachers in the nearby southern Iraqi cities such as Wāsit, Baṣrah, and Kūfah. He then traveled to Syria, Palestine, and Egypt, where he met with scholars of *ḥadīth*, *qirā’āt*, and eminent scholars of the Mālikī and Shāfi‘ī schools of thought. He then returned to Baghdad and, married only to his scholarly activities, spent the next fifty years teaching and writing on multiple disciplines. His vast knowledge included expertise on jurisprudence, exegesis, *ḥadīth*, *akhbār* (narrative reports), and even some knowledge of medicine, but he is most famous for his qur’ānic commentary and his *History* (see #64). Ideologically, he was what

would have been considered ‘orthodox’ at the time and was most closely aligned with the Shāfi‘ī school of thought. His insistence on *ijtihād* (independent scholarly judgement) led to the formation of his own school of thought, the Jarīrī, but it was so close to the Shāfi‘ī school that not long after his death it was entirely absorbed into the Shafi‘ī school. Despite the fact that al-Ṭabarī expressed great respect for Aḥmad ibn Ḥanbal’s expertise in *ḥadīth* scholarship, he noted that this expertise did not extend to jurisprudence. The followers of Ibn Ḥanbal, who had not yet been fully accepted as one of the four major schools of thought in Sunnī Islam, took issue with al-Ṭabarī. Ensuing conflicts sometimes resulted in mob violence, with al-Ṭabarī’s house being stoned on at least one occasion and his teaching lectures disrupted for the remainder of his years. Al-Ṭabarī died in 310/ 923 and was buried in his own home.⁹

Al-Ṭabarī’s application of the methodology of *ijtihād* is one of the major reasons his works are so valuable for us today. His *History* and his qur’ānic commentary “form the most extensive of extant early works of Islamic scholarship and ... preserve for us the greatest array of citations from lost sources.”¹⁰ This fact alone is enough to earn his commentary its place on our list as it is a unique source for our understanding of numerous earlier commentaries. The Arabic title is *Ḥāmī‘ al-bayān ‘an ta’wīl al-Qur’ān* (“The Collection of Explanatory Interpretations of the Qur’ān”).

He begins with a few introductory sections on the clarity, eloquence, and logic of the Qur’ān; Arabic vocabulary and the Arabic language; variant readings of the Qur’ān, on the methodology of ascertaining the meanings and reports against interpretation *bi-al-ra’y* (according to personal intellectual opinion, as opposed to *bi-al-ma’tḥūr*, in accordance with the authority of the scholarly community); reports of companions who commented on the Qur’ān; and some words of caution against incorrect interpretations. He also discusses some of the names which have been attributed to the Qur’ān, as well as names attributed to chapters of the Qur’ān; some of the names attributed to the *fātiḥah* (the opening verses); then delves into the formulae recited prior to beginning and after ending a reading of

the Qur'ān (the *basmalah* and *isti'ādah*, respectively). He then begins with a commentary on the text of the Qur'ān parsing the qur'ānic text into short phrases and providing various narrative reports explaining the meanings. He frequently cites second, third, and fourth opinions, and offers his own conclusions. He uses *ḥadīth* reports and sometimes also quotes relevant verses of poetry to support his explanations. He even mentions variant readings at relevant junctures. Sometimes he narrates in a question/answer format.

As an example of his position on the allegorical reading of certain Qur'ānic verses, see his comments on Q 7:54, where he interprets God's sitting on His throne ("*thumma istawā 'alā al-'arsh*," then He sat upon His throne) allegorically. This type of allegorical reading is one contrasted by the extremely literal views of traditionist opponents who attacked him, maintaining the opinion that God actually sat his hind quarters on a physical throne. The work is not only exegesis but also includes analysis of lexical and grammatical issues and addresses the relation of the qur'ānic verses to issues of theology and Islamic law. The importance of the work was immediately recognized and it quickly became popular, with abridgements, commentaries, and translations following not long after. It remains a valuable work to this day.

Several Arabic editions of the *Jāmi' al-bayān* have been published.¹¹ There is no English translation of the complete text, but translated selections are available.¹² There is also an English index to the commentary.

4

ABŪ JA‘FAR AL-ṬŪSĪ’S
AL-TIBYĀN FĪ TAFSĪR AL-QUR’ĀN

(*“The Exposition in the Interpretation of the Qur’ān”*)

Muḥammad ibn al-Ḥasan ibn ‘Alī al-Ṭūsī (d. 459-60/1066-7, known as Abū Ja‘far) was originally from Khurāsān (a historical region spread across modern Iran, Afghanistan and Central Asia), where he was raised and educated in the Shāfi‘ī school of thought. At the beginning of the 4th/10th century, he left for Baghdad, where the Shī‘ī Buwayhī dynasty was in power at the time. He became a student of some of the greatest Imāmī Shī‘ī scholars there and immersed himself among the heavily Mu‘tazilī-influenced Imāmī rationalists. He was a student in the inner circle of the great al-Shaykh al-Mufid (d. 413/1022) as well as his disciple, al-Sharīf al-Murtaḍā (d. 436/1044) and showed such mastery and talent that al-Ṭūsī succeeded al-Sharīf al-Murtaḍā as leader of the Imāmī Shī‘īs. He enjoyed Buwayhī administrative support and was even appointed to a theology position by the caliph. His home essentially “became for a period of more than ten years the virtual intellectual centre of Imāmism.”¹³ After the Saljūq invasion of Baghdad and the fall of the Buwayhīs, the Shī‘ī neighborhoods of Baghdad were attacked by Ḥanbalī mobs and many libraries were burned. Abū Ja‘far al-Ṭūsī escaped to Najaf and continued his scholarly activities there until he died over a decade later in 459-60/1066-7.¹⁴

His extraordinary contributions to Imāmī intellectual activity make him a monumental figure. He provided the intellectual foundations for the future of rationalist Imāmī thought. He maintained and fostered the importance of *ijtihād* (independent scholarly judgement) in religious decision-making. He began to redefine the role of the *mujtahid* (scholarly religious leader) to include bearing the responsibility of leadership of the community in the absence of the last Imām. His *al-Tibyān fī tafsīr al-Qur’ān* (“The Exposition in the Interpretation of the Qur’ān”) was the first major Imāmī Shī’ī rationalist exegesis of the Qur’ān.

He begins with an introduction describing his methods and his use of *ḥadīth* reports narrated from the Prophet and from the Prophet’s family. He frequently mentions “our school of thought,” indicating his distinctly Shī’ī perspective. He also discusses the various names attributed to the Qur’ān as well as to its various chapters, then specifically about the *fātiḥah* (opening chapter) and the reason it named thus. Then, throughout his exegesis of each section he includes subsections addressing grammatical issues, linguistic issues, and refers to variant readings when relevant. His commentary has more of a narrative presentation than most, leans towards esoteric meanings throughout, and uses Shī’ī *ḥadīths* and logical reasoning to justify his explanations. As examples, one can note his definitions of “*ahl al-bayt*” (the people of the household) in Q 33:33-34, and his explanation of prophetic inheritance when “*ja’alnā fī dhurriyatihi al-nubūwwah*, and We made prophethood to continue among his progeny” is mentioned in Q 29:27 and in Q 57:26.

Ṭūsī’s *Tibyān* was more than just the first major Imāmī Shī’ī rationalist exegesis of the Qur’ān. His work both explains the qur’ānic basis of the views of this school of thought and helps to establish the qur’ānic foundations for the subsequent intellectual evolution of this school in the centuries to come.

An Arabic edition of the *Tibyān* has been published,¹⁵ but no English translation is yet available.

AL-ZAMAKHSHARĪ'S

AL-KASHSHĀF 'AN ḤAQĀ'IQ AL-TANẒĪL

(*"The Revealer of the Truths of Revelation"*)

Maḥmūd ibn 'Umar al-Zamakhsharī (d. 538/1144), known as Abu al-Qāsim, was born to the *imām* (prayer leader) of a local mosque at Zamakhshar (Yzmiksir, in modern Turkmenistan). He learned the Qur'ān from his father. Because his family was not financially able to support any further education, he moved to the provincial capital, Jurjāniyyah (modern Konye-Urgench in Turkmenistan), where he worked as a copyist and studied to advance his literary education. Aiming for a position in government, he traveled throughout northern and western Persia, dedicating poems to various ministers and Sultāns, but was never rewarded with a government position, probably because of his openly Mu'tazilī views. During a serious illness, he disavowed his aim for high government position and chose instead to devote himself to a simple, faithful life. He went to Baghdad and studied with scholars there, then traveled to Mecca (modern Saudi Arabia) for the pilgrimage, where he was well-received by the ruler of Mecca. He also traveled to study under scholars in other parts of Arabia, Yemen, Syria, and back to Baghdad. Throughout these travels, he stopped repeatedly in Mecca, sometimes for years at a time, thereby earning his nickname '*Jār Allāh*' (the neighbor of God). It was during one of these stops that he was encouraged to compose a commentary on the Qur'ān, which he

completed, along with a literary/historical compendium (see #50) that was meant as a companion to this commentary. He died in 538/1144 at Jurjānīyah, the same provincial capital where his higher education began.¹⁶

His *al-Kashshāf ‘an ḥaqā’iq al-tanzīl* (“The Revealer of the Truths of Revelation”) is the first major commentary on the Qur’ān from a rationalist Mu’tazilī perspective. After a brief introduction, including a brief history and a discussion of the names of chapters of the Qur’ān, he addresses portions of text ranging from short verses to longer portions comprising passages of several verses together. Unlike other commentaries that rely mostly on *ḥadīth* quotations to explain the qur’ānic text, he also quotes prose literature as well as poetry to support his openly Mu’tazilī rationalist interpretations. For example, one may note his interpretation of the meaning of “*awliyā’ Allāh* the friends of God” in Q 3:31, as well as his allegorical treatment of Q 6:128 (“*khālīdīna fīhā illā mā shā’ Allāh*,” they reside in it forever, except for that which God wishes.) and Q 33:57 (“*al-ladhīna yu’dhūna Allāha*,” those who trouble God). His “efforts in explaining the Holy Book’s grammatical, lexicographical and rhetorical features, variant readings, and the miraculous nature... of its beautiful language earned him universal admiration.”¹⁷ The work was so well received by so many that, over a century later, al-Bayḍāwī (d. ca. 685/1286) would compose his own Qur’ān commentary (little more than an abbreviated version of the *Kashshāf* but with the Mu’tazilī portions expunged), aiming specifically to counter the popularity of this commentary’s Mu’tazilī perspective.

Several Arabic editions of the *Kashshāf* have been published.¹⁸ No complete English translation has yet been published, but translated excerpts are available¹⁹ as well as an excellent English scholarly work on al-Zamakhsharī’s *Kashshāf*.²⁰

6

AL-ṬABRISĪ'S

MAJMA' AL-BAYĀN LI-'ULŪM AL-QUR'ĀN

("The Compilation of Explanations in the Sciences of the Qur'ān")

Known as Abū 'Alī, al-Faḍl ibn al-Ḥasan al-Ṭabrisī (d. 548/1154) was born in Tabrish (modern Tafresh, between the Iranian cities of Qum and Hamadān) and grew up in Khurāsān. Some of his teachers were students of Abū Ja'far al-Ṭūsī (#4) and some of his teachers were Sunnī, reflecting an open-mindedness that transcended base sectarian tendencies more common among lesser intellects. After completing his studies, he moved to Sabzawār (modern Iran), where he taught for the remainder of his life. His students are among the notable Imāmī scholars of the succeeding generation. He died in 548/1154 and is buried in Mashhad (modern Iran).²¹

His *Majma' al-bayān li-'ulūm al-Qur'ān* ("The Compilation of Explanations in the Sciences of the Qur'ān") builds on al-Ṭūsī's *Tibyān* (#4) and he credits al-Ṭūsī explicitly. He also criticizes al-Ṭūsī's commentary for certain weaknesses. Again, his willingness to praise the achievements of his own teachers as well as criticizing their faults reveals an intellectual open-mindedness not common enough in scholarship, even today. This is also reflected in the content of his exegesis, where he incorporates both Sunnī and Shī'ī views in his commentary. He begins with an introduction that includes discussion

of seven ‘arts’ specific to the Qur’ān; the numbering of the verses and its importance; the names of the earliest reciters and of those who narrate on their authority; on the differences between commentary, interpretation, and meaning; the names of the Qur’ān, on qur’ānic sciences; on the superior qualities of the Qur’ān and its people; and on appropriate recitation and pronunciation. Stylistically, his method involves approaching short passages consecutively (rather than verse-by-verse), with subsections addressing variant readings, linguistic and grammatical matters, and commentary. He also sometimes includes subsections on questions and a subsection on *nuzūl* (the context of revelation). As an example, his explanation of Q 13:7 “*innamā anta mundhirun wa-li-kullī qawmin hād*, indeed you are a warner and every people has a guide,” which he relates to a *ḥadīth* reportedly about Muḥammad as the *mundhir* (warner) and ‘Alī as the *hād* (guide) of the Muslims. This interpretation is now standard among Imāmī Shī’īs.

Multiple Arabic editions of the *Majma‘ al-bayān* are available,²² but there are not yet any complete English translations.²³

FAKHR AL-DĪN AL-RĀZĪ'S
MAFĀTĪḤ AL-GHAYB

(*"The Keys to the Unseen"*)

Muḥammad ibn ʿUmar ibn al-Ḥusayn al-Rāzī (d. 606/1209, known as Fakhr al-Dīn) was born in Rayy (on the outskirts of modern Tehran, Iran) and studied first under his father, a preacher, before traveling and studying philosophy and jurisprudence. Philosophically, he was a staunch Ashʿarī, frequently and publicly opposing the rationalist Muʿtazilī scholars around him, eventually being forced to leave one area after another until he returned to Rayy. He eventually intended to travel to Bukhārā (modern Uzbekistan), but finding the same difficulties as his previous trips to the Transoxiana region, he settled instead at Herat (modern Afghanistan). It was during this phase of his life that he was at the peak of his career, having come up from poverty into fortune and having gathered a following of hundreds of disciples and students. He was an eminent teacher, well known throughout the central Asian region for his intelligence and his piety. He had a thorough understanding of philosophy, studied and commented on al-Fārābī (see #69) and Ibn Sīnā (see #70), but was not reticent when it came to criticizing the masters on points with which he disagreed. In spite of his solid grasp of essentially secular philosophy, he remained deeply religious and his preaching was responsible for the conversion of many to traditional Sunnī views. Nevertheless, he did not fail to earn his share of

enemies. On at least one occasion he was the target of a mob instigated by accusations that his teachings were ‘tainted’ by pagan Greek philosophy. About seven years later he suffered his final illness, during which he dictated his to his disciple, “I have had experience of all the methods of *kalām* (theological disputation) and of all the paths of philosophy, but I have not found in them either satisfaction or comfort to equal that which I have found in reading the Qur’ān.”²⁴ He died in 606/1209 at Herat.²⁵

He was a prolific and encyclopedic writer with works not only on philosophy, rhetoric, and Qur’ān, but also on Arabic language and literature, astrology, medicine, and mineralogy. His most famous and most important work is his commentary, the *Mafātīḥ al-ghayb* (“The Keys to the Unseen”), or simply *al-Tafsīr al-kabīr* (“The Grand Commentary”). Throughout the commentary, he compares the exegetical notions of others before stating what he believes to be the best conclusion. He expresses his philosophical, cosmic perspective with graceful sophistication and relates various parts of the qur’ānic text thematically to each other. For example, in addressing whether or not God can be seen, he relates Q 7:143 “*rabbī arinī anzuru ilayka*, my Lord, allow me to see you” to Q 6:103 “*lā tudrikuhu al-abṣār*, vision is unable to grasp Him.” Al-Rāzī’s extensive mastery of secular philosophy and his traditional theological scholarship are evident in this exegesis. He combines elegantly his vast knowledge of both in this classic Sunnī Ash‘arī explication of the Qur’ān’s verses. The work had a profound effect on qur’ānic exegesis that lasted from his lifetime to this day.

Multiple editions of al-Rāzī’s *Mafātīḥ al-ghayb* are available in Arabic.²⁶ No complete English translation is yet available, but selections have been translated.²⁷ Indices have also been published.²⁸

8

IBN AL-‘ARABĪ’S

TAFSĪR

(“*The Commentary*”)

Muḥammad ibn ‘Alī ibn Muḥammad ibn al-‘Arabī²⁹ (d. 637/1240, known as Muḥyi al-Dīn) was born in Murcia, but his family moved to Seville (both in modern Spain) when he was eight years old. After beginning his formal education, he worked as a scribe. Still at an early age, during the course of an illness, he reportedly experienced a vision that changed his life. At the time, Ibn Rushd (Latin ‘Averroes,’ see #72), chief Judge of Seville and a close friend of Ibn al-‘Arabī’s father, was impressed with the boy’s intelligence. It is likely that he influenced the young Ibn al-‘Arabī’s development with teachings in neo-Platonic philosophy. Over the course of the next decade, Ibn al-‘Arabī studied with numerous teachers in Spain and North Africa, including two women. Then at age thirty, he began to travel further afield. He went to Fez (modern Morocco) and Tunis (modern Tunisia), returning to Spain to attend Ibn Rushd’s funeral at Cordoba and then to Almeria (both in modern Spain), Cairo (modern Egypt), Jerusalem (modern Israel/Palestine), and Mecca (modern Saudi Arabia) for the *ḥajj* pilgrimage. He stayed two years in Mecca and composed his famous *al-Futūḥāt al-makkīyah* (“The Meccan Revelations,” see #31). In Mecca, he met some pilgrims from Anatolia and joined them on their return journey through Baghdad, Mosul (in modern Iraq), and Malatya (modern

Turkey). In subsequent years, he traveled again to Jerusalem, Cairo, Mecca, Konya (modern Turkey), Baghdad, Aleppo (modern Syria), Aksaray and Sivas (both in modern Turkey), before finally settling in Damascus (modern Syria). In spite of harsh criticism from more conservative elements for his unorthodox views, he gained the protection of an influential family there and the remainder of his days were spent in scholarly pursuits. He died in 637/1240 and was interred in the family's burial grounds on Mount Qāsiyūn in Damascus.³⁰

He was extraordinarily prolific, with over two hundred works attributed to him and quite likely many others not yet completely catalogued. His writings were fundamental in shaping and popularizing mystical Šūfī thought and had great influence in Anatolia, Yemen, Persia, and India. He also had an influence on Medieval Europe, where his description of Muḥammad's ascent to heaven has been shown to have influenced Dante's *Divine Comedy*.³¹ Throughout his works he expounds on the notion that there is a special type of knowledge (unlike the rational knowledge of the philosophers), that comes through direct connection with God and that this knowledge is acquired through a personal mystical journey towards the Divine. The traveler on this journey goes through various stages, at the end of which one's heart is purified, all knowledge becomes known, God shows Himself, and the traveler becomes one with God. Some of the more fundamentalist conservatives considered such views sacrilegious and heretical.

This view of experiential knowledge that surpasses the limits of rational intellect is evident also throughout his commentary on the Qur'ān, known simply as *Tafṣīr Ibn al-ʿArabī* ("The Commentary of Ibn al-ʿArabī"). In his qur'ānic interpretation, these mystical views are expressed in symbolic understandings of such things as Noah's ark, where the sea is seen to be worldly matter while the ark represents God's divine salvation. Similar symbolic interpretations follow throughout the commentary on various other themes, such as Adam and Eve in the garden of Eden, Satan's fall from grace, and the stories of Prophets such as Abraham, Solomon, Moses, and others. They also manifest in Ibn al-ʿArabī's explanation the holy spirit (*rūḥ al-*

qudus, mentioned in Q 2:87, Q 5:110), which he interprets as being the mystical secrets, the true understanding of which is available only to Ṣūfī saints who have completed the spiritual journey. Perhaps the most famous example of a Ṣūfī reinterpretation of an orthodox principle in Islamic law is that of qur’ānic references to the term *jihād* (e.g., Q 2:216; 2:274; 3:121, 3:169). Literally meaning “struggle,” the word is commonly taken to mean a military struggle in the way of God, and is reinterpreted by Ibn al-‘Arabī as meaning a personal, inner struggle against one’s ‘self,’ selfish desires, and the temptations of Satan. Throughout the work, he maintains an adherence to basic qur’anic principles, but offers in essence a mystical, metaphysical retelling. As with most Ṣūfī thought, Ibn al-‘Arabī’s exegesis is not truly concerned with legalistic issues of jurisprudence. It is focused instead on a mystical and esoteric understanding of achieving spiritual oneness with God.

There are several Arabic editions of Ibn al-‘Arabī’s *Tafsīr*.³² There is not yet a complete English translation, but translations of some of his other works are available, and a great many works have been written about Ibn al-‘Arabī (see also #31) and the influence of his thought.³³

AL-QURṬUBĪ'S
AL-ĴĀMI' LI-AḤKĀM AL-QUR'ĀN

(*"The Collection of the Regulations of the Qur'ān"*)

Muḥammad ibn Aḥmad ibn Abī Bakr al-Qurṭubī (d. 671/1272) was an Andalusian scholar (as his name, Qurṭubī, from Cordova, implies) of the Mālikī school of thought. He was well versed in both *ḥadīth* and jurisprudence and is most famous for his commentary, *al-Ĵāmi' li-aḥkām al-Qur'ān* ("The Collection of the Regulations of the Qur'ān"). He was known for the profound and multi-disciplinary wealth of his knowledge. He was also known for his piety, being "inclined towards asceticism and towards meditation on the life after death. He appeared in public attired in a single garment and wore a small cap on his head."³⁴ Some of his teachers in jurisprudence, *ḥadīth*, and qur'ānic studies are known, but we know little else of his biography other than the fact that he traveled at least as far as the eastern Mediterranean. He is known to have settled in upper Egypt, where he eventually died in 671/1272.³⁵

He prefaces his commentary with extensive introductory subsections. He begins with discussions on such matters such as the superior qualities of the Qur'ān and those who study, recite, listen to, and act upon it; the manner in which it should be recited; on appropriate behavior in relation to it; warnings against affectation and pretensions; and on reciting in a grammatically correct manner. He then continues with discussions on the superior qualities of commentary

and commentators; those who carry on the tradition of the Qur'ān and who they are; on what they and the reciters of the Qur'ān must do in showing respect and the preferred methods of ending a reading or recitation; on the inappropriateness of commentary according to *ra'y* (personal opinion, as opposed to documented explanatory *ḥadīths*); on appropriate commentary based on the traditions of the Prophet; and on the manner of learning and understanding it and the traditions in practice. He then transitions to a discussion on the *ḥadīth* of the seven *ahruf* (variants); on the fact that many scholars do not consider the seven *ahruf* as referring to the seven variant readings; on the meaning of *ḥadīths* to that effect; on the 'Uthmānī compilation of a standardized Qur'ān, 'Uthmān's burning of other manuscripts, and mention of those who memorized the Qur'ān during the Prophet's time. The final few introductory sections cover refutation of those who deny the Qur'ān; the organization of chapters, verses, and other structural technicalities; the definition of chapter, verse, and letter; on the question of whether foreign (non-Arabic) words have entered the language of the Qur'ān; the miraculous nature of the Qur'ān; *ḥadīths* on the superior qualities of the Qur'ān; and a response to those who attack the Qur'ān or the 'Uthmānī standardization.

He then discusses the formulae for beginning and ending a qur'ānic recitation and begins his exegesis, which has a heavily jurisprudential quality. He presents a main-stream, traditional view, with an interest in the commonly accepted variant readings. He also exhibits an interest in linguistic features of the text and includes poetic citations as supporting examples. On the whole, this exegesis is an anti-Mu'tazilī, non-esoteric, non-allegorical reading that emphasizes the use of *ḥadīths* for explication and views verses with a focus on their jurisprudential implications in Islamic law. For example, his commentary on Q 2:30, "*innī jā'ilun fī al-arḍi khalīfah*, indeed, I am making a vice-regent on the Earth," when God tells the angels of Heaven that He is appointing Adam as his vice-regent (caliph) to rule the Earth, al-Qurṭubī relates this to the appointment of Abū Bakr (r. 11-13/632-634) as the first caliph after Muḥammad's death, vindicating the orthodox view and refuting the views of those who

reject the legitimacy of his caliphate. The work is a prime example of the Andalusian style of Qur'ān commentary. Independently, it is a rich exegetical source where al-Qurṭubī's mastery of religious, grammatical, and literary works is brought to bear on a legalistic understanding of the Qur'ān. While the author himself is a follower of the Mālikī school of thought, he incorporates and presents aspects of the other three main Sunnī schools of thought as well.

Several Arabic editions of al-Qurṭubī's *al-Jāmi' li-aḥkām al-Qur'ān* are available.³⁶ There is not yet any complete English translation, but portions have been incorporated into a related English work.³⁷

10

MĀLIK'S MUWAṬṬA'

(*"The Trodden Path"*)

Mālik ibn Anas ibn Mālik (d. 179/796) was a jurist from Medinah (modern Saudi Arabia), where he seems to have spent most of his life. Little is reliably known about his early life. Many legendary tales about his life were later documented, such as reports that he spent three years in the womb before being born more mature than other infants, that Muḥammad foretold Mālik's coming, that he studied under nine hundred teachers, and the like. Such reports are clearly a retrospective product of his fame in subsequent centuries, after followers of his views formed the Mālikī school of thought that is now named after him. We do know that both his grandfather and his uncle were traditionists (reporters of *ḥadīths*, the sayings or deeds of the Prophet), that he studied jurisprudence, and that he learned the qur'ānic variant reading of Nāfi' (see Ibn Mujāhid, #2). It appears that he was already a relatively well known figure in his lifetime, preventing him from abstaining entirely from the numerous rebellions and uprisings that were based in Medinah. While he does not seem to have led any rebellion and was not openly hostile to the central government, neither did he openly support it. After the failure of one such rebellion, he was publicly flogged and suffered a dislocated shoulder, but later in his life, his reputation appears to have been more respected. Caliphs consulted his opinion on architectural upgrades at Mecca (modern Saudi Arabia) and he even

received a personal visit from the caliph Hārūn al-Rashīd (r. 170-193/786-809). Mālik died in 179/796 in Medinah and was buried in the *baqīʿ* cemetery, near the Prophet's mosque.³⁸

The *Muwattaʿ* ("The Trodden Path") is the work for which he is known. It represents an early stage in the development of Islamic law, which had not yet become the fully formed science of jurisprudence of later centuries. Aside from establishing the foundations in this development, one of its main contributions is its emphasis on the traditions of the city of Medinah (by consensus) as being representative of the practice of Muḥammad. It also highlights the importance of strict criticism of *ḥadīths* and, as such, was foundational in establishing the importance of *ḥadīth* studies for answering legal questions left unanswered by the Qurʾān. Additionally, Mālik's emphasis on the importance of *ijmāʿ* (consensus, with Mālik referring to the consensus of the people of Medinah) was articulated further by his disciple al-Shāfiʿī (see #21) in his own seminal work years later. *Ijmāʿ*, in an expanded sense as the consensus of the broader scholarly community, eventually came to form the third major foundational source of Islamic law after the Qurʾān and *ḥadīths*.

The work itself is divided into sections on prayer, the Qurʾān, funerary rites, charity, fasting, and the *ḥajj* pilgrimage. The *ḥadīths* often, but not always, include a complete chain of transmitters back to Muḥammad himself. Some are followed by brief explanatory statements made by Mālik. It is the earliest surviving Muslim book of law. The book aims to give a "survey of law and justice; ritual and practice of religion according to the *idjmaʿ* of Islam in Medina, according to the *sunna* usual in Medina; and to create a theoretical standard for matters which were not settled from the point of view of *idjmaʿ* and *sunna*."³⁹ While it may be seen as the first Islamic law book, the *Muwattaʿ* is included here in the *ḥadīth* section due to its foundational role in establishing the importance of *ḥadīth* studies in Islamic law for both Sunnī and Shīʿī schools of thought.

Numerous Arabic editions of the *Muwattaʿ* have been published,⁴⁰ as well as both complete and selected English translations.⁴¹ Scholarly volumes on Mālik and his *Muwattaʿ* are also available.⁴²

11

AL-BUKHĀRĪ'S

ṢAḤĪḤ

(*“Authentic [Collection]”*)

Muḥammad ibn Ibrāhīm ibn Ismā‘īl al-Bukhārī (d. 256/870) was born in Bukhārā (modern day Uzbekistan) and was reported to have been a precocious child with a remarkable memory. He began studying and memorizing *ḥadīths* by ten years of age and corrected his teachers even as a youth. Six years later, he performed the pilgrimage to Mecca (modern Saudi Arabia) with members of his family but after his family returned home, he remained in the area to learn more *ḥadīths*. Throughout his life, he traveled the central Islamic lands and as far West as Egypt, with the same goal. He is reported to have learned *ḥadīths* from over one thousand teachers. Towards the end of his life, he began to face some opposition to his views and was even accused of heterodoxy. At Nishāpūr (modern day Iran) he was forced to leave and traveled back to his hometown of Bukhārā. He was initially well-received by the governor. His refusal to tutor the governor's children privately, insisting instead that they join lessons in the mosque or at his home just as everyone else did, led the governor to expel him. He went to a village outside of Samarqand (modern day Uzbekistan) and, dejected and depressed, was reportedly overheard praying to God to take him. He died there shortly thereafter, in the year 256/870. His mausoleum in Samarqand is now a major pilgrimage site.⁴³

His *Ṣaḥīḥ* (“Authentic [Collection]”) is a compendium of *ḥadīths* collected and evaluated over the course of approximately sixteen years. From the vast corpus of over one half million *ḥadīths* that Bukhārī came across in his life-long search throughout his travels, he scrutinized the chains of transmitters, each of whom allegedly heard it from his teachers in a chain going all the way back to the Prophet Muḥammad himself. After selecting only those *ḥadīths* that met his high standards of reliability, he did not include any in his book until first performing the washing of ritual purity and a two-prostration prayer. The result is a work of over 7,000 *ḥadīths* with complete *isnāds* (chains of transmitters). This religiously scrupulous vetting process and the pious ritual washing and prayer accompanying each quotation contributed significantly to the near-scriptural authority that this work attained among Sunnī Muslims in later centuries. It is divided into ninety-seven chapters, each with numerous subchapters, beginning with sections on revelation, faith, knowledge, ritual purity, menstruation, prayer, and all manner of subjects related to Islamic law from marriage, clothing, medicine, hunting and the slaughter of animals, to punishments for crimes. While contemporaneously seen as just one among many such sources of *ḥadīth*, by the 4th/10th century, Bukhārī’s *Ṣaḥīḥ*, along with that of Muslim (see #12, next), came to be seen by the Sunnī Muslim community as second only to the Qur’ān in religious authority. Although in Islam it is technically inappropriate to do so for anything other than the Qur’ān, Muslims to this day continue to view these two sources as unquestionable in their authority. These two, in addition to four others, constitute for the Sunnī Muslim schools of thought a group of foundational texts known as the *ṣiḥāḥ al-sittah* (the six authentic [sources]).

Numerous Arabic editions of this foundational source have been published.⁴⁴ Several English translations are also available,⁴⁵ as are scholarly studies on al-Bukhārī and his *Ṣaḥīḥ*.⁴⁶

12

MUSLIM’S

ṢAḤĪḤ

(“*Authentic [Collection]*”)

Muslim ibn al-Ḥajjāj ibn Muslim al-Naysābūrī (d. 261/875) was born in Nīshāpūr (modern day Iran). As with many others who mastered the study of *ḥadīths*, he began to travel at an early age in search of teachers of traditions. He traveled to Iraq, Arabia, Syria and Egypt and learned *ḥadīths* from many masters. Among his teachers are some who were students of al-Shāfi‘ī (see #21). He died in 261/875 and was buried in a suburb of Nīshāpūr.⁴⁷

His *al-ḥāmi‘ al-ṣaḥīḥ* (“The Authentic Collection”) is the work for which he is best known. Along with al-Bukhārī’s *Ṣaḥīḥ* (see previous, #11) it is considered canonical by Sunnī Muslims. It is, like the *Ṣaḥīḥ* of al-Bukhārī, a vast compendium, with the author sifting through a reputed 300,000 *ḥadīths* and ultimately selecting between 1-2% for this collection of only the most accurate and authentic selections. Muslim also includes significant introductory material before beginning his collection. He discusses the importance of reporting from only trustworthy transmitters, of calling out disbelief in the Prophet of God, of refraining from reporting everything one hears as well as refraining from reporting from unreliable transmitters, of reporting only what has a reliable chain of transmission, and the like. While most consider Bukhārī’s source to be predominant and Muslim’s a close second, scholars of Spain and North Africa seem to have the reverse preference, citing Muslim as foremost. And, while its prestige

overall may be secondary, it is of greater scholarly use because it does not exhibit some of the organizational weaknesses of al-Bukhārī's *Ṣaḥīḥ*. For example, al-Bukhārī's collection duplicates various *ḥadīths* in numerous thematically unrelated chapters. The *ḥadīths* in Muslim's source are organized such that *ḥadīth* variations on a single theme are, for the most part, concentrated within a single chapter. Muslim's avoidance of such duplication makes it much easier to trace more carefully the evolution of a single *ḥadīth* report and its variants. Muslim's *al-Jāmi' al-ṣaḥīḥ* is thus an indispensable source for the scholarly study of *ḥadīths*.

Numerous Arabic editions of this foundational source have been published.⁴⁸ Several English translations are also available,⁴⁹ including a valuable annotated translation of Muslim's own introduction,⁵⁰ several translated abridgements,⁵¹ and an English translation of another work gathering the *ḥadīths* that are common to both Muslim's collection and that of al-Bukhārī.⁵² English language scholarly works on Muslim and his work are also available.⁵³

13

AL-KULAYNĪ'S

AL-KĀFĪ

(*"The Sufficient"*)

Muḥammad ibn Ya'qūb ibn Ishāq al-Kulaynī (d. 329/941, sometimes Kulīnī) was born in the village of Kolīn, outside the city of Rayy (modern Iran). While little factual information is known about his early life, we know that he transmitted reports from teachers who were in Rayy, Qumm, and Nishāpūr (all in modern Iran). Presumably, he traveled to those cities and studied under those teachers for some time before eventually moving to Iraq and settling in Baghdad. He authored several works, but none have survived except his *al-Kāfī* ("The Sufficient"), which he reportedly spent two decades producing. He died in 329/941 in Baghdad and his tomb, largely neglected in the years after his death, was eventually rebuilt and popularized after his later fame.⁵⁴

His *al-Kāfī* is a collection of *ḥadīths*, from both the Prophet and from the Imāms, descendants of the Prophet's lineage whom Shī'īs believe to be the inheritors of his revealed knowledge. In his introduction, al-Kulaynī describes the relevance of the book's title, saying that it is "completely sufficient, collecting within it from all of the disciplines of religious studies that suffice the student."⁵⁵ He begins the book with a section on *ʿaql* (reason) as the principle factor in differentiating between knowledge and ignorance, clearly establishing the significance of this distinguishing feature of Shī'ī theology (and Mu'tazilī Sunnī philosophy). He then continues with sections on the

oneness of God, Prophecy, and *imāmah* (leadership), including the twelfth (hidden) Imām, before proceeding with the compendium of *ḥadīths*. The work as a whole is divided into three parts. The first addresses theology, prophecy, Imāmate, and prayer; the second deals with jurisprudence; and a final section comprises miscellany. Within each section, reports are arranged according to relevant subsections and al-Kulaynī occasionally includes a subsection entitled *nawādir* (rare, uncommon reports). The collection includes only those reports he deems consistent with orthodoxy as he defines it and *ḥadīth* reports are sometimes followed by his own comments and explanations. It contains over 16,000 *ḥadīths*, nearly all of which are supported by preceding *isnād* chains of transmission, with only very rare exceptions. Some include condensed *isnād* chains. The work is the oldest of the Shīʿī canonical *ḥadīth* sources, produced in part with the deliberate aim of countering the Sunnī scholarly community's claim to exclusivity in authentic *ḥadīths* of the Prophet.

While a prominent scholar in his time, neither he nor his work was considered preeminent contemporaneously. Even a century after his death, his name does not appear in the famous catalogue of Ibn al-Nadīm (see #57). However, it seems that Abū Jaʿfar al-Ṭūsī (see #4) promoted and cultivated al-Kulaynī's *al-Kāfi*, and thereby also his reputation, resulting in al-Kulaynī's later popularity.⁵⁶ Over the centuries, his *al-Kāfi* became an essential source which, along with three other works (see #14, next), constitute the *kutub al-arbaʿah* (the four books), which form the foundational Shīʿī sources viewed by scholars of the Twelver Shīʿī school of thought as equivalent in importance to that which the Sunnī schools of thought attribute to the *ṣiḥāḥ al-sittah* (the six authentic [books], see #10, #11, and #12).

Several Arabic editions of al-Kulaynī's *al-Kāfi* are available.⁵⁷ Although there is not yet available an English translation of the complete text, the chapters on "Reason and Ignorance" and on "The Excellence of Knowledge" have been translated,⁵⁸ as well as shorter selections.⁵⁹ Scholarly works on the role of Kulaynī and his work are also available for the interested English reader.⁶⁰

AL-QUMMI'S
MAN LĀ YAḤḌURUHU AL-FAQĪH

(*“For Whom There Is No Theologian Present”*)

Muḥammad ibn ‘Alī ibn Ḥusayn al-Qummī (d. 381/991, known as al-Shaykh al-Ṣadūq) was born in Qum (modern Iran) to a wealthy merchant father and a slave mother. He was the youngest of three boys, all of whom were scholars of theology. His extended family was a well-known scholarly family. Little is known of his early life. There is a legendary account that he was born as a result of a request to the twelfth (hidden) Imām of the Twelver Shī‘īs. He grew up in Khurāsān, but travelled to Baghdad, where he taught during the reign of the Buwayhī prince Rukn al-Dawlah (r. 323-366/935-976). He was a prolific author, with over two hundred works attributed to him, most of which have not survived the ravages of time. He was one of the most eminent scholars of the Twelver Shī‘ī school of thought and his work is particularly noteworthy in that he generally takes a median view on the Shī‘ī spectrum, between the extremist views of the *ghulāt* (extremists) on one side and the *mu‘tazilī* rationalists on the other. He died at Rayy (on the outskirts of modern Tehran, Iran) in 381/991.⁶¹

In his brief introduction, al-Qummī reports that he was asked to compose a theological equivalent of Muḥammad ibn Zakarīyā al-Razī’s (see #84) *Man lā yaḥḍuru al-ṭabīb* (“For Whom There Is No Physician Present”). He states that his *Man lā yaḥḍuru al-faqīh* (“For

Whom There Is No Theologian Present”) is designed to be a comprehensive source that can be relied upon to address all of the most basic theological questions of the lay reader. Having compiled and condensed information from no less than two hundred and forty-five sources, he states that he decided, for the sake of brevity, not to include repetitions of *isnād* chains of transmission preceding each entry. Instead, because of the frequency of multiple reports from the same source, he lists *isnād* chains of transmission in an index at the end of the work. One of the major accusations levied against Shīʿī *ḥadīth* scholars, and a criticism for which they are frequently stereotyped by their Sunnī counterparts, is that Shīʿī *ḥadīths* lack *isnād* chains of transmission. In fact, as this work (and Kulaynī’s *al-Kāfī*, “The Sufficient,” #13) demonstrate, the accusation is unfounded. The *isnāds* are recorded, but sometimes presented in a format that is atypical for the traditional Sunnī style of a major *ḥadīth* sourcebook.

Immediately after the introduction, he begins with a chapter on water, ritual purity and impurity, before moving on to ritual prayers and other theological matters. Each major section has relevant subsections; for example, the section on prayer has subsections on matters such as optional prayers, travelers’ prayers, funerary prayers, etc. It is, as the title indicates, a compilation of *ḥadīths* that answer the most common theological questions arising on the most basic day-to-day aspects of Islamic law, narrating reports attributed to the Prophet and the Imāms of the Twelver Imāmī school of thought. Along with three others, it constitutes the second of the *kutub al-arbaʿah* (the Four Books, see also previous, #13), which form the foundational Shīʿī sources that are the equivalent of the *ṣiḥāḥ al-sittah* (the Six [Authentic] Sources) of the Sunnī school of thought (see #10, #11, and #12).

Multiple Arabic editions of al-Qummi’s *Man lā yaḥḍuruḥu al-faqīh* have been published.⁶² No complete English translation is available yet, but a selection has been translated.⁶³

IBN SA'D'S

KITĀB AL-ṬABAQĀT AL-KABĪR

(“*The Grand Book of the Classes [Generations]*”)

Muḥammad ibn Sa'd ibn Manī' al-Baṣrī⁶⁴ (d. 230/845) was a traditionist who traveled widely but eventually settled in Baghdad and became a disciple of another famous author, al-Wāqidi, earning him the nickname *kātib al-Wāqidi* (the scribe of al-Wāqidi). He was one of the orthodox scholars summoned by the caliph to declare their agreement with the official Mu'tazilī rationalist position of the court, and Ibn Sa'd did so without objection. He taught aspects of the Qur'ān to one of the transmitters who narrated to Ibn Mujāhid (see #2). He also wrote books on jurisprudence and other subjects, but he is most famous for his *Kitāb al-ṭabaqāt al-kabīr* (“The Grand Book of the Classes [Generations]”). It is perhaps the most comprehensive, earliest authoritative biographical dictionary. While some similar but less extensive works were written earlier, many of which he used to compile the information in his own work, some of the earlier authors, including his own teacher, did not match Ibn Sa'd's reputation for reliability. He died in 230/845 at Baghdad.⁶⁵

He begins the work without any introduction, with the first biography being that of Muḥammad. It begins with reports of Adam and Eve, then some biblical prophets such as Noah and Abraham, leading to the generations of the Quraysh tribe before Muḥammad's birth, and then to the biography of Muḥammad himself. The work includes biographical information on over 4,000 individuals who

transmitted *ḥadīths*, including over five hundred women. These individual biographies are divided initially by generation (those who were alive during the time of the Prophet, then the next generation, then the generation after that); then by region of residence, and chronologically within region. He follows the generations from the Prophet's time all the way up to his own, with lengthier and more detailed biographies of the Prophet and his companions and biographical entries becoming more and more concise as they approach his own century. This innovative generational approach was highly respected by traditional scholars from all schools of thought and has since become crystallized in Muslims' approach to their own religious history. The work quickly gained a reputation as one of the foundational works in *rijāl* and has sustained its enormous reputation through the centuries to our modern times.

Ibn Sa'd's *Kitāb al-ṭabaqāt al-kabīr* comes to us in several manuscript recensions and a number of Arabic editions have been published.⁶⁶ English translations of some subsections are available, but there is no complete English edition.⁶⁷

16

IBN ABĪ ḤĀTIM AL-RĀZĪ'S *AL-ḤARḤ WA-AL-TA'DĪL*

(“*Condemnation and Confirmation*”)

‘Abd al-Raḥmān ibn Abī Ḥātim al-Rāzī (d. 327/938, not to be confused with other famous scholars named Rāzī, see #7 and #84), as his *kunya*, al-Rāzī, suggests, was born to a family in Rayy (on the outskirts of modern Tehran, Iran). His father was a *ḥadīth* scholar. He reports that he wanted to study *ḥadīths* with his father, Abū Ḥātim Muḥammad ibn Idrīs al-Rāzī (277/890), but was not allowed to until he learned the Qur’ān first. Once he completed his qur’ānic studies, he began to study *ḥadīths* with his father as well as with a friend of his father’s, Abū Zur’ah ‘Ubayd Allāh ibn ‘Abd al-Karīm al-Rāzī (d. 284/878, also mentioned in the entry for al-Ka’bī, #17, next) and with others in Rayy. At the age of fifteen, he traveled to perform the *ḥajj* pilgrimage with his father. Then at age twenty-two, he traveled on his own to Syria, Egypt, Baghdad, and Iṣfahān (modern Iran) in search of further knowledge. He died in 327/938 at the age of eighty.⁶⁸

The title of his book, *al-Ḥarḥ wa-al-ta’dīl* (“Condemnation and Confirmation”), is in reference to two technical terms in *ḥadīth* studies, meaning “condemning as unreliable” and “confirming reliability” (of transmitters of *ḥadīths*), respectively. The terms refer to the art/science of critical examination of *riyāl* (biographies of the individuals who narrated reports). The work itself is based on Ibn

Sa'd's *Ṭabaqāt* (#15, previous) and also expands on it. Al-Rāzī begins his introduction with sections on the high rank of the Prophet, an understanding of his practice, differentiating between various transmitters, and the generations and classes of narrators. Subsequent sections discuss in detail various aspects of the biography of Mālik ibn Anas (see #10), the leading authority in Medinah (modern Saudi Arabia), then the book follows a similar pattern with leading individuals in Mecca, Baṣrah (modern Iraq), Damascus (modern Syria), etc., and continues along the same lines with subsequent generations. His book is based mostly on information from his father, as well as from his father's friend, Abū Zur'ah al-Rāzī. Ibn Abī Ḥātim also wrote *Bayān khaṭā' al-Bukhārī fī tārikhih*,⁶⁹ ("Clarification of the Error of al-Bukhārī in his History"), a short book addressing issues the author found in Bukhārī's (see #11) *riḡāl* work, *al-Ta'rikh al-kabīr* ("The Grand History").⁷⁰

Ibn Abī Ḥātim al-Rāzī's *al-ḡarḡ wa-al-ta'dīl* is available in a complete Arabic edition⁷¹ and its introduction has also been published as an independent volume.⁷² There is no complete English translation, but an excellent scholarly volume on the introduction is available in English.⁷³

AL-KA‘BĪ’S

QUBŪL AL-AKHBĀR WA-MA‘RIFAT AL-RĪJĀL

*(“The Acceptability of Reports and Acquaintance
with the People [Narrating Reports]”)*

‘Abd Allāh ibn Aḥmad ibn Maḥmūd al-Ka‘bī (d. 319/931) was born in Balkh (in modern day Afghanistan). Little is known about his early life, but it appears that at some point, he became a fervent disciple of his Mu‘tazilī teacher. Eventually he became a master with disciples of his own. He founded a school at Nakhshab (modern Qarshi) near Bukhārā (both in modern Uzbekistan), and his teachings converted some of the area’s local folk to Islam.⁷⁴ He was at some point associated with a local governor of Nishāpūr (modern Iran) who later rebelled against the caliph. The association apparently resulted in al-Ka‘bī’s imprisonment, until a government minister in Baghdad had him released. After his release from prison, he moved to Baghdad and appears to have spent much of his life there, where he composed over a dozen works that achieved some fame in the capital.⁷⁵ He was noted for his skill in dialectics and rhetoric. Toward the end of his life, he returned to Balkh and remained there until he died in 319/931.⁷⁶

His *Qubūl al-akhbār wa-ma‘rifat al-rījāl* (“The Acceptability of Reports and Acquaintance with the People [Narrating Reports]”) begins with a brief introduction of only a few pages. After the usual

preliminaries on following the practice of the Prophet and the consensus of the community, he describes the importance of authentication of *ḥadīths* and the importance of *isnād* chains of transmission. His Mu‘tazilī perspective is clear in his use of rational language and in emphasis on reason and logical thinking. In contrast to traditionalist reliance on only sound chains of transmission, he emphasizes that even *ḥadīths* with sound chains of transmission should be disregarded if the content is contrary to what reason dictates Muḥammad would have said or done. For example, a report that Muḥammad ate pork or drank wine is to be disregarded, no matter how sound its chain of transmission.

The entire text is intentionally highly critical and he notes that its focus is on identifying the problematic personages in chains of transmission. One can note even from the chapter titles that the work is a biographical dictionary focused on helping the reader to eliminate unreliable *ḥadīth* transmitters (and thereby also eliminating the *ḥadīths* they report) rather than identifying authentic *ḥadīths*. He begins the book with a chapter on the corruption of many *ḥadīths* and people who spread intentionally falsified *ḥadīths*. Other chapters include one devoted to reports of anecdotes that are contrary to appropriate Islamic behavior, another to reports that are obviously factually incorrect, and yet other chapters devoted to examples of the absurd, to transmitters who have been accused of ignorance, and the like.

This *rijāl* work is important in that the author’s overtly critical Mu‘tazilī tendencies toward logical reasoning permeate this source for *ḥadīth* criticism, moving beyond simple mechanical analysis of chains of transmission. While al-Ka‘bī’s was neither the first such work to focus on weak transmitters nor the most extensive, it is valuable in its methodical, systematic, and perhaps most importantly, *logical* approach to the discipline.

An Arabic edition of al-Ka‘bī’s *Qubūl al-akhbār* has been published.⁷⁷ There is not yet an English translation, but an excellent scholarly work on al-Ka‘bī is available in English.⁷⁸

IBN ḤIBBĀN'S
TĀRĪKH AL-ṢAḤĀBAH
ALLADHĪNA RUWĪYA 'ANHUM AL-AKHBĀR

(*“The History of the Companions
 from Whom Reports Were Transmitted”*)

Muḥammad ibn Ḥibbān al-Tamīmī (d. 354/965, known as Abū Bakr) was born in Bust (modern day Lashkargah, Afghanistan). Little is known of his early life, but very early in his education he seems to have gravitated toward an interest in *ḥadīths*. He appears to have spent the first thirty years of his life mastering *ḥadīths* and related studies in and around his home. Apparently having exhausted nearby educational resources, he began to travel in search of more teachers and more *ḥadīths*. He spent the next thirty years of his life in this search, traveling from Central Asia, west toward the Caspian Sea and the Persian Gulf, along the Fertile Crescent, across Syria, into Anatolia as far as Antioch and Tarsus, across the Holy Land, into the Arabian Peninsula, and as far as upper Egypt before returning towards his homeland.⁷⁹ He faced some opposition from local Ḥanbalīs in Sijistān (modern Iran), whose anthropomorphic views of God were too extreme for him to accept and who accused him of heresy. He moved on to Samarkand (modern Uzbekistan), where his expertise in *ḥadīths* and other qualities earned him an appointment as Judge of Samarkand. They also earned him many enemies, forcing him to move on once again. At Nīshāpūr (modern Iran) he built a

khāniqāh (Sūfī spiritual retreat) but not long after, he left his home there as well as his significant book collection as a library and religious endowment for scholarly use in perpetuity. Having returned to the city of his birth and having reached the eighth decade of his life, he died in the year 354/965 at Bust.⁸⁰

We have records that he wrote at least forty books, though many of them, as is unfortunately all too common, have been lost to history. Several of his *ḥadīth* and *rijāl* books survived, including works on classes of transmitters⁸¹ similar to Ibn Saʿd's (see #15), a work on weak transmitters⁸² similar to al-Kaʿbī's (see previous, #17), and other works for which his systematic arrangement of *ḥadīths* is noted.⁸³ But his *Tārīkh al-ṣaḥābah alladhīna ruwīya ʿanhum al-akḥbār* ("The History of the Companions from Whom Reports Were Transmitted") is significant in that it was the first (extant, published) source that focused exclusively on the companions of the Prophet who transmitted *ḥadīths*. He uses an alphabetical arrangement, including female transmitters in a separate section after the male transmitters within the same letter of the alphabet. After the alphabetical listings he includes a section on *kunā* (tekonymic epithets, e.g., 'father of so and so' or 'mother of so and so') and a section on females known by their *kunā* but not known by their complete names. The work was foundational as the basis for very influential later works expanding on the same principle. About a century later, Ibn ʿAbd al-Barr (463/1071) improved on Ibn Ḥibbān's work in his famous *al-Istīʿāb fī asmāʾ al-aṣḥāb* ("The Complete Grasp of the Names of the Companions").⁸⁴ Two centuries after that, ʿIzz al-Dīn ibn al-Athīr (see #66) further improved on these two in his *Usd al-ghābah fī maʿrifat al-ṣaḥābah* ("Lions of the Forest in the Knowledge of the Companions").⁸⁵ And the series was further improved with the culminating work of Ibn Ḥajar al-ʿAsqalānī (852/1448) in his *al-Iṣābah fī tamyīz al-ṣaḥābah* ("Hitting the Mark in Distinguishing between the Companions").⁸⁶ A similar series of expansions and improvements is noted in the case of the *rijāl* work of al-Mizzī (see #20).

Ibn Ḥibbān's *Tārīkh al-ṣaḥābah* is available in a published Arabic edition,⁸⁷ but no English translation is yet available.

ABŪ JA‘FAR AL-ṬŪSĪ’S

*RIJĀL**(“Biographical Evaluation”)*

Muḥammad ibn al-Ḥasan ibn ‘Alī al-Ṭūsī’s (d. 459-60/1066-7, known as Abū Ja‘far) biography has already been discussed (see #4). In addition to his qur’ānic commentary and his work on jurisprudence (see #22), he has compiled two of the earliest and most important works of Shī‘ī *rijāl*. His *Rijāl* (“Biographical Evaluation”) includes a brief one-page introduction in which he explains that the book is the result of repeated requests for the composition of a source book on the narrators from the Prophet and from each of the twelve Imāms.⁸⁸ He reports that earlier such works were brief and provided only limited information but hopes that his work proves to be a more expansive and more organized research tool. He begins with those who narrated directly from the Prophet Muḥammad, then includes individual sections for narrators who reported from each of the successive Imāms until the twelfth Imām. Then he includes a chapter on narrators who did not narrate reports from any of the twelve Imāms. Within each chapter he lists narrators alphabetically, ending with a section on those known only by their *kunyah* (teknonymic designation) and a section including female narrators, if any, before moving on to the next chapter. Over 6,400 narrators are included. Although most are listed only by name and without detailed biographical information, the identification of the narrators is itself

important in sifting through the multitude of names in the chains of transmission of *ḥadīth* reports.

Also composed by al-Ṭūsī is another work that includes *rijāl* information, his *Fihrist kutub al-shīʿah*⁸⁹ (“Bibliographical Index of the Books of the Shīʿah,” see #58) which is highly regarded even by Sunnī scholars. It expands upon and corrects information provided in Ibn al-Nadīm’s (see #57) *Fihrist* “Catalogue,” upon which it is based. In chronological order, al-Kashshī’s (d. 340 /951) *Maʿrifat akhbār al-rijāl*⁹⁰ (“Acquaintance with the Reports of People [Narrating Reports]”), these two *rijāl* works by al-Ṭūsī, and the *Asmāʾ al-rijāl*⁹¹ (“The Names of People [Narrating Reports]”) of al-Ṭūsī’s contemporary, Aḥmad ibn ʿAlī al-Najāshī (d. 455/1063) constitute the four foundational *rijāl* works of Shīʿī *ḥadīth* scholarship.

The *Rijāl al-Ṭūsī* is available in several Arabic editions,⁹² but no English translation has been published.

AL-MIZZĪ'S
TAHDHĪB AL-KAMĀL FĪ ASMĀ' AL-RIḤĀL

*(“The Improvement of Completeness
 in the Names of People [Narrating Reports]”)*

Yūsuf ibn al-Zakī ‘Abd al-Raḥmān ibn Yūsuf al-Mizzī (d. 742/1341) was born near Aleppo but grew up in Mizzah, on the outskirts of Damascus (all in modern Syria). He received a traditional education in the Qur’ān, but does not appear to have been from a famous scholarly family and does not seem to have been guided towards advanced religious studies. There is some evidence of his involvement with Sūfī circles at an early age, but he eventually befriended a fellow student, Taqī al-Dīn ibn Taymīyah (d. 728/1328) and seems to have gravitated quickly toward his friend’s eccentric sentiments. This, unfortunately, led to some time spent in jail. In spite of the fact that he ascribed to the Shāfi‘ī school of thought (see #21, next), he was forever accused of being tainted by the zealous Ibn Taymīyah, who would be his lifelong friend.⁹³ At age twenty one, al-Mizzī became dedicated to a career studying *ḥadīths*.⁹⁴ He traveled throughout Syria, Egypt and Palestine in search of teachers and *ḥadīth* reports, gathered extensive knowledge of *ḥadīths* and of those who narrated them, eventually becoming a formidable expert in *riḥāl*. He became head of an endowed *ḥadīth* school in Damascus, where he taught until his death in 742/1341.⁹⁵

His *Tahdhīb al-kamāl fī asmā' al-rjāl* ("The Improvement of Completeness in the Names of People [Narrating Reports]") constitutes one of the most exhaustive works of its kind and is the first major work of *rjāl* deliberately designed to be so voluminous. The work includes every individual transmitter mentioned in all of the six canonical Sunnī *ḥadīth* collections, and more. It is a comprehensive multivolume work that includes not only the information available to al-Mizzī from earlier sources, but also whatever other information he was able to gather himself throughout his travels. He includes an extensive introduction spanning twelve (printed) pages and he explains his intentions for a comprehensive book compiling all of the information available to him. He states that he formulated shorthand designations referencing the six canonical *ḥadīth* collections to simplify the task of the scribes who would be copying his vast compendium. He also describes how he lists the narrators in alphabetical order, with initial preference to the generation of the companions of the Prophet so that one would be able to distinguish whether a chain of transmission was directly linked to his generation or skips generations. He begins with brief chapters on the great *ḥadīth* scholars, the importance of the study of *ḥadīth*, and the significance of the six canonical *ḥadīth* collections. He proceeds to include several sections on Muḥammad, including various aspects of his biography. He then begins with the name "Aḥmad" out of respect for its status and similarity to "Muḥammad," but aside from this discrepancy, continues alphabetically from "Abān" and on. In the entries, he includes designations of the individuals' reliability as narrators and also includes at the end separate volumes for women narrators and for *kunā* (teknonyms). The work as a whole is comprehensive, exhaustive, and indispensable for anyone interested in *rjāl* studies.

The second work for which al-Mizzī is famous is his *Tuḥfat al-ashrāf bi-ma'rīfat al-aṭrāf* ⁹⁶ ("The Treasure of the Nobles in the Knowledge of Partial *Ḥadīths*") a compendium of chains of transmission of *ḥadīths* and also an invaluable source for serious *ḥadīth* scholarship. His *Tahdhīb al-kamāl* ("The Improvement of Perfection") was condensed and improved upon by Ibn Ḥajar al-'Asqalānī

(d. 852/1448) in his *Tahdhīb al-tahdhīb*⁹⁷ (“The Improvement of the Improvement”). One of Mizzī’s students, al-Dhahabī (d. 748/1348), also composed an important biographical dictionary entitled *Ṣīyar a’lām al-nubalā*⁹⁸ (“The Biographies of the Luminaries among the Nobles”), which Ibn Ḥajar al-‘Asqalānī also improved upon in his *Lisān al-mīzān*⁹⁹ (“The Speech of Balance”). Ibn Kathīr (d. 774/1372), al-Mizzī’s son-in-law, authored the famous historical compendium, *al-Bidāyah wa-al-nihāyah*¹⁰⁰ (“The Beginning and the End”).

The entirety of al-Mizzī’s monumental *Tahdhīb al-kamāl* is available in a thirty-five volume Arabic edition,¹⁰¹ but no English translation is yet available.

AL-SHĀFI'Ī'S

AL-RISĀLAH FĪ UṢŪL AL-FIQH

(*“Treatise on the Principles of Jurisprudence”*)

The biography of Muḥammad ibn Idrīs ibn al-‘Abbās al-Shāfi‘ī (d. 204/820) is one full of confusion and contradictory reports. Much of what is reported about his life seems to be influenced by his later fame. It is unclear how much of what is reported is retrospective and legendary. Historical sources seem to agree that he was born in the same year that Abū Ḥanīfah died (150/767), but it is not clear if he was born in coastal Palestine, or in the Arabian Peninsula, either in Yemen, or on the outskirts of Mecca (modern Saudi Arabia). He appears to have had ancestry of the Quraysh tribe, though the details of his genealogy are also questionable. He was still a child when his father died and his mother moved to live with her relatives in Mecca. After his childhood education there, he excelled in Arabic language, eloquence, poetry, and had a reputation for excellent marksmanship as an archer. He then appears to have been called ‘in search of knowledge’ and began to study under master jurists in Mecca, one of whom apparently allowed him authority to declare *fatwās* (legal decisions) while still a teenager. He became drawn to the renown of Mālik ibn Anas (see #10) in nearby Medinah and apparently memorized Mālik’s *Muwatta’* (“The Trodden Path”) before becoming one of his disciples there. He remained in Medinah until Mālik’s death approximately ten years later. He also appears to have studied under

a Mu'tazilī teacher in Medinah, which is an embarrassment minimized by later biographers. He then seems to have travelled back and forth multiple times between Iraq and the Arabian Peninsula. It appears that at some point, he was involved in a political revolt in the Najrān area of the Peninsula, for which he was brought before the caliph Hārūn al-Rashīd (r. 170-193/786-809) in Baghdad, and possibly imprisoned, but then pardoned while his co-defendants were executed. In Iraq, he was involved in disputations with disciples of the school of Abū Ḥanīfah (d. 150/767), apparently met Aḥmad ibn Ḥanbal (d. 241/855), and composed the first version (now lost) of his *Risālah* (Treatise). Facing opposition from the disciples of Mālik in Arabia and from the followers of Abū Ḥanīfah in Iraq, he settled in Egypt with a major family at Fuṣṭāṭ. There he composed the second version of his *Risālah* (the version we have today) and his other major work, the *Kitāb al-umm* (The Main Book). It was not long before he was attacked by local Egyptians of the Mālikī school of thought. As with the reports of his life, those of his death are also confused. He died in the year 204/820, some sources saying from an illness and others saying from a physical attack by his Mālikī opponents.¹⁰²

Among his works that have been published are his *Kitāb al-umm*¹⁰³ (The Main Book) and his poetry collection.¹⁰⁴ However, he is best known for his *al-Risālah fī uṣūl al-fiqh* ("Treatise on the Principles of Jurisprudence"), which is without doubt a major contribution to Islamic legal thought. Its importance is not so much due to his handling of specific legal details but because of its methodical systematization. It is the first such source to formulate and clearly articulate a defined system for Islamic law. He identified the Qur'ān, and the practice of the Muḥammad as primary sources of Islamic law, with gaps filled by the use of analogical reasoning. Such systematization is impossible without the application of rational thinking (possibly influenced by his early Mu'tazilī teacher in Medina) and constituted grounds for fervent opposition from many factions. In rejecting the notion that local traditions of Medinah inarguably represent the practice of Muḥammad, he angered the followers of Mālik, who believed precisely that. In insisting on *qiyās*

(analogy) with earlier legal proofs, he angered the followers of Abū Ḥanīfah, who believed in more loosely applied *ra'y* (professional opinion). He was also discredited by the *ḥadīth* folk, and neither of the two major canonical Sunnī sources, Bukhārī or Muslim (see #11 and #12, respectively) record any of his reports.

After a short introduction in which the author emphasizes the importance of the study of God's commands, the work is composed mainly of chapters on *bayān* (declaration), legal knowledge, the book of God, the necessity of accepting the authority of the Prophet, abrogation of divine legislation, duties, nature of God's and the Prophet's prohibitions, and a chapter on traditions. Then, after devoting most of his book to discussing God and His Prophet (as expressed in the Qur'ān and the *ḥadīths*), he also spends a few pages discussing *ijmā'* (consensus), *qiyās* (analogy), *ijtihād* (juridical reasoning), *istiḥsān* (preference), and *ikhtilāf* (disagreement). The fact that he devoted so much of his text to the former categories and so little to the latter is itself indicative of his methodological emphasis on eliminating as much human intervention in the law of God as possible.

While disputed or marginalized during his time and for over a hundred years after his death, in subsequent centuries al-Shāfi'ī's *Risālah* became a foundational source in Islamic law. It was and continues to be studied as an essential textbook on Islamic jurisprudence. It has been published in numerous Arabic editions¹⁰⁵ and multiple English editions.¹⁰⁶ An excellent scholarly study of the text and its role in early Islamic legal theory is also available in English.¹⁰⁷

ABŪ JA‘FAR AL-ṬŪSĪ’S
 ‘UDDAT AL-‘UṢŪL

(“*The Preparation of the Sources [of Jurisprudence]*”)

A concise summary of al-Ṭūsī’s (d. 459-60/1066-7) biography has already been mentioned in the section on his exegesis (see #4). Worthy of repeating is the fact that his early education in Khurāsān was heavily influenced by the Shāfi‘ī (see previous, #21) teachings prevalent in the area at that time.¹⁰⁸ While some go so far as to claim that he was a Shāfi‘ī who converted to Shī‘ism, others maintain that he was simply a Shī‘ī whose early intellectual upbringing was within a predominantly Shāfi‘ī milieu. In any case, a careful look in al-Ṭūsī’s ‘*Uddat al-‘usūl*’ (“The Preparation of the Sources [of Jurisprudence]”) will readily reveal the influence of al-Shāfi‘ī’s *Risālah* (“Treatise”). Like al-Shāfi‘ī, al-Ṭūsī focuses on the principles of jurisprudence as a system. He attempts to address the science of *uṣūl* comprehensively and to formulate a systematic framework with which to approach the discipline. Like his exegesis (see #4) and his major work on *ḥadīth* (see #19), he states that he composed this text in response to the expressed need for such a work in the [Shī‘ī] scholarly community. In this work, he mentions his deliberate intent to provide a comprehensive and simultaneously concise summary of *uṣūl al-fiqh* (the sources of jurisprudence) according to Shī‘ī schools of thought.¹⁰⁹ He does so beginning with chapters on the importance of the study of the discipline itself, on the organization and classification of various forms of

knowledge, on the word of God and various approaches to viewing commandments as generalized or specific, on *ḥadīth* reports and methods of identifying the reliability of reports, etc. Of critical significance are his sections on *qiyās* (analogy) and *‘aql* (logical reasoning). All Muslim schools of thought agree that there are four sources of law, and all agree that the first three (in order of importance) are: The Qur’ān, *ḥadīths*, and *ijmā‘* (consensus). However, if a legal question remains unresolved after examining evidence in these first three sources, Sunnī schools of thought follow the system established by al-Shāfi‘ī in his *Risālah* and consider the fourth source to be *qiyās* (analogy), while Shī‘ī scholars view analogy as a weak and problematic legal method. According to the Shī‘ī schools of thought, *‘aql* (logical reasoning) was the fourth source of law rather than analogy. This was the case even prior to al-Ṭūsī, but al-Ṭūsī’s *‘Uddat al-‘usūl* codified the status of *‘aql* as the fourth source of law in Shī‘ī jurisprudence.

In the work, al-Ṭūsī credits earlier scholars such as his own teachers, Shaykh al-Mufid (d. 412/1022) and al-Sayyid al-Murtaḍā (d. 436/1044) for their roles in the development of *uṣūl* in the Shī‘ī schools of thought, but al-Ṭūsī’s *‘Uddat al-uṣūl* was the first work to systematize the discipline comprehensively from the Shī‘ī scholarly perspective, playing a role for that community similar to the role of al-Shāfi‘ī’s *Risālah* in the Sunnī scholarly community.

Several Arabic editions of al-Ṭūsī’s *‘Uddat al-uṣūl* are available,¹¹⁰ but no English translation has yet been published. A short selection from another of his legal works is available in English translation.¹¹¹

AL-GHAZĀLĪ'S

AL-MUSTAṢFĀ FĪ 'ILM AL-UṢŪL

*(“The Purified [Essence] in the Science of Sources [of
Jurisprudence]”)*

Muḥammad ibn Muḥammad al-Ghazālī (d. 505/1111, known as Abū Ḥāmid) was born in Ṭūs (in modern day Iran) and orphaned at an early age. His early education began in his hometown but eventually led him to Jurjān, then to Nīshāpūr (both in modern Iran). With time, he became one of the scholars attracted by the Saljūq high minister, Nizām al-Mulk (d. 484/1092), who founded across the empire the institutions of higher learning that were the predecessors of European universities centuries later. He became one of the most renowned teachers at the *Nizāmiyyah* school in Baghdad and lectured to audiences of hundreds. After several years, he suffered what appears to have been a nervous breakdown. He left not only the capital and his position there, but also his entire career behind him. In his most famous book (see #28), he reports that he did so in order to save his own soul from what he saw as a thoroughly corrupt legal, educational, religious and administrative system. Other theories attempting to explain his apparent abandonment of a successful academic life include his fear of Ismā'īlī assassins, who reportedly killed his benefactor, Nizām al-Mulk, as well as concern over other major shifts in the political winds of the time. For the next eleven years, he entered a skeptical and renunciant phase in which he refused any

official teaching positions affiliated with state institutions. He continued to pursue private learning and teaching, living as a poor ascetic. It is in this period that he composed his most famous work (see #28) on the revival of religious sciences, and others from among the over four hundred works attributed to him. Eleven years later, he returned to teaching, but not for long. Soon after, he settled back at his hometown of Tūs, where he had established a Ṣūfī *khāniqāh* (meditative retreat), and trained disciples in a monastic ascetic Ṣūfī lifestyle until his death in 505/1111.¹¹²

The early legal education of al-Ghazālī was as a jurist, which, among Sunnī schools at the time, generally did not include Greek logic. However, al-Ghazālī had studied the Arabic neo-platonism of al-Fārābī (see #69) and Ibn Sīnā (see #70). He was already heavily influenced by Aristotelian logic and incorporated it in his discussions of religious matters, including against the esoteric views of the Ismāʿīlīs. His *al-Mustasfā min ʿilm al-uṣūl* (“The Purified [Essence] from the Science of Sources [of Jurisprudence]”) reflects the philosophical training that is obvious in his approach to *uṣūl al-fiqh* (the sources of jurisprudence). The work represents the articulation of Shāfiʿī jurisprudential tradition in a highly logical and organized manner. He frequently uses agriculture as a metaphor (fruit, trees, roots, branches, harvesting, etc.) to describe the appropriate manner in which legal information is to be sought, and conclusions processed. One example of this is his chapter on the four sources of law, in which he cites logical definitions delimiting the scope of *qiyās* (analogy). While Shīʿī schools of thought readily adopted the use of logic in theological debates, it was al-Ghazālī who pioneered the incorporation of (Muʿtazilī) Aristotelian logic in (otherwise Ashʿarī) Sunnī theological debates. The *Mustasfā* had a profound influence on later Muslim theologians. Ibn Khaldūn (see #67) remarks that a new trend in Islamic theology was initiated by al-Ghazālī,¹¹³ as it was his great influence that led to the gradual incorporation of logic, one of the foundations of *falsafah* (see part III), into theological debates in Islam. Al-Ghazālī also had a tremendous influence on the study of theology

in Europe, as evidenced by the writings of Thomas Aquinas (d. 1274), whose interest in Islamic Studies has been well documented.¹¹⁴

Several Arabic editions of al-Ghazālī's *al-Mustasfā* are available.¹¹⁵ No complete English translation has yet been published, but translations of selected portions of the *Mustasfā* are available.¹¹⁶

FAKHR AL-DĪN AL-RĀZĪ'S
AL-MAḤṢŪL FĪ 'ILM USŪL AL-FIQH

(*“The Production in the Science of Sources
of Jurisprudence”*)

Fakhr al-Dīn al-Rāzī's (d. 606/1209) biography has already been mentioned along with his most famous work, his exegesis (see #7). Having been born within less than a century of al-Ghazālī's death (see previous, #23), Fakhr al-Dīn al-Rāzī's solid education in philosophy, combined with his firm Ash'arī stance in theological matters made him uniquely qualified to help entrench permanently into orthodox Sunnī Ash'arī theology the logical approach already introduced by al-Ghazālī. His *al-Maḥṣūl fī 'ilm usūl al-fiqh* (“The Production in the Science of Sources of Jurisprudence”) is the work that brought al-Ghazālī's initial legitimization of the use of logic in Sunnī theology to full fruition and, as a result, holds a major place in bridging the classic debate between reason and revelation. His penchant for solid argumentation and insistence on sound logic is evident throughout the work.

He begins by establishing the definitions of technical terms essential in understanding the parameters of the discipline as a whole. He then proceeds with chapters and subchapters on right and wrong, language and semantics, actual meaning and metaphorical meanings, how to approach deriving legal decisions from the word of God and word of the Prophet, the mandatory and the forbidden,

generalizations and specifics, on abrogation, etc. Throughout the work, he cites specific examples from the Qur'ān and explicitly refutes several Mu'tazilī positions. He even cites the views of other scholars such as al-Ghazālī, Abu Ḥanīfah, etc., whenever a view is posited with which he takes logical issue. The *Maḥṣūl* serves less as an introductory or comprehensive textbook of *uṣūl* and more as a refined guide on how to approach the subject with intellectual rigor. Fakhr al-Dīn al-Rāzī's characteristic logical disputation and unabashed intolerance of weak arguments are apparent throughout the work. The result is an excellent example of skillfully harmonizing the faithful devotion of believers in Divine revelation with the scientific reasoning of the philosophers.

Fakhr al-Dīn al-Rāzī's *al-Maḥṣūl* is available in several Arabic editions,¹¹⁷ but no English translation has yet been published.

AL-ĀMIDĪ'S

*AL-IḤKĀM FĪ USŪL AL-AḤKĀM**("Precision in the Sources of [Legal] Decisions")*

‘Alī ibn Abī ‘Alī ibn Muḥammad al-Āmidī (d. 631/1233, known as Sayf al-Dīn) was born in Āmid, near Diyarbakr (in modern Turkey) on the banks of the Tigris River. He was initially a follower of the Ḥanbalī school of thought, but after continuing his education at Baghdad, eventually came to follow the Shāfi‘ī school. He continued his education in Syria and then in Egypt, where he eventually taught near the burial place of the great al-Shāfi‘ī himself (see #21). He established his reputation on his mastery of philosophy and other disciplines. However, that same intellectual mastery also made him the target of traditionalists who opposed the entry of ‘rational’ sciences into traditional religious thought. He was accused of heresy but managed to escape to Syria, where he served various Ayyūbī rulers. He eventually obtained a teaching position in Damascus (modern Syria), where he taught until his death in 631/1233.¹¹⁸

Among his many works on theology, philosophy, and law, his major work is *al-Iḥkām fī usūl al-aḥkām* (“Precision in the Sources of [Legal] Decisions”) on the sources of theoretical jurisprudence. It is dedicated to the Ayyūbī ruler al-Malik al-Mu‘azzam (r. 647-648 / 1249-1250), who assigned him chairmanship of a *madrasah* (college) in Damascus. It represents in many ways the culmination of works in

this discipline. It is the most comprehensive of the classical texts not only in its breadth, but also in its depth. He “covers the entire range of theoretical-jurisprudential issues... leaving no issue known to him untouched.”¹¹⁹ Additionally, the author’s mastery of disputation is evident in his treatment of each individual subject, where he presents faithfully not only the spectrum of scholarly opinions and their supporting arguments, but also opposing arguments, as well as rebuttals to each. His scrupulousness in documentation of the wide variety of opinions and arguments and the resulting comprehensiveness of this text made it both difficult and unnecessary for later scholars to continue composing similar works. Instead, after al-Āmidī’s *Iḥkām* one begins to see an increasing tendency towards commentaries and concise summaries (see #26, next).

Numerous Arabic editions of al-Āmidī’s *al-Iḥkām* have been published.¹²⁰ While there is no English translation, *per se*, an excellent exposition of al-Amidī’s *al-Iḥkām* is available in English.¹²¹

26

IBN AL-ḤĀJIB'S

AL-MUKHTAṢAR

(*"The Summary"*)

‘Uthmān ibn ‘Umar ibn Abī Bakr al-Mālikī (d. 646/1249, known as Ibn al-Ḥājib, son of the chamberlain, due to his father's position with the local ruler) was born in Asnā (modern Egypt). His early studies were in Cairo (modern Egypt), where he showed promise as a young student. After his early education, he continued to live and teach in Cairo. There he earned a reputation as a notable jurist of the Mālikī school of thought, but he was most well known as a grammarian and the author of two short but influential works on morphology and syntax. As a jurist, “he was the first to combine in his writings the doctrines of the Egyptian Mālikīs and the Mālikīs of the Maghrib.”¹²² In his late forties, he traveled to Damascus (modern Syria), where he was respected as a scholar of the Mālikī school and taught in the Mālikī section of the Grand Mosque at Damascus for about twenty years. After a disagreement with the ruler of Damascus, he was expelled from the city and returned to Cairo. From there, he moved to Alexandria (modern Egypt) to spend the remainder of his days. He died shortly thereafter in the year 646/1249.¹²³

His *al-Mukhtaṣar* (“The Summary”) is an abridgement of a larger work, *Muntahā al-su‘āl wa-al-amal fī ‘ilmay al-uṣūl wa-al-jadal* (“The Culmination of Desire and Hope in the Two Sciences of Sources [of Jurisprudence] and Disputation”), which focuses on the sources of

Islamic law from the perspective of the Mālikī school of thought. It is organized thematically, beginning with sections on ritual purity and ablutions, followed by sections on each major aspect of the law. After ritual purity are chapters on prayers, charity, fasting, pilgrimage, ritual slaughter of animals, war, marriage, divorce, breastfeeding, etc. These are followed by chapters on transactions, such as sales, loans, and the like. The work is a concise thematic presentation of Islamic law according to the Mālikī school of thought. It represents a trend in the later classical period toward commentaries and summaries, as earlier classical sources had already dealt comprehensively with the material in exhaustive detail. Another example of this trend is al-Bayḍāwī's (d. 685/1286) *Minhāj al-wuṣūl ilā 'ilm al-uṣūl*¹²⁴ ("The Method for Arrival at the Science of Sources [of Jurisprudence]"), a very popular but unoriginal work with the same organization as al-Ghazālī's *al-Mustasfā* (see #23), condensed to less than two hundred pages. Ibn al-Ḥājjib's abridgement of his own larger comprehensive work is valuable not only as an example of this trend, but also as a representative work of *uṣūl* from the perspective of the Mālikī school of thought that remains popular across North Africa to this day.

Several Arabic editions of Ibn al-Ḥājjib's *al-Mukhtaṣar* have been published,¹²⁵ but no English translation is yet available.

AL-ḤĀKIM AL-TIRMIDHĪ'S
BAYĀN AL-FARQ BAYN AL-ŞADR WA-AL-QALB

*("Clarifying the Difference Between
 the Chest and the Heart")*

Muḥammad ibn 'Alī al-Tirmidhī (d. 320/938, known as al-Ḥākim) was born in Tirmidh (modern Termez, Uzbekistan), on the banks of the Amu Darya river that now constitutes the border between modern Afghanistan and Uzbekistan. Little is known of his life and much of what has been reported is questionable. His 'biography,' *Bad' sha'n Abī 'Abd Allāh*¹²⁶ ("The Beginning of the Matter of Abū 'Abd Allāh") serves less as a biography and more as a document of his spiritual journey. It seems that he began his studies at about eight years of age and studied first with his father. He left his homeland to perform the *ḥajj* pilgrimage at about age twenty-seven. During this trip, he studied *ḥadīth* in Baṣrah (modern Iraq) and collected traditions from Iraqi teachers. In Mecca (modern Saudi Arabia) he appears to have reached a spiritual awakening. He began to devote himself to mysticism and returned to his homeland. The subsequent period of his life included long periods of solitary reflection during which he experienced increasing closeness to God. After some time, his visions and revelations proved to be too much for some of his contemporaries and he was accused of charges such as claiming to be a prophet and corrupting the minds of the general public. He was summoned to official proceedings which lasted some

years, after which his accusers fled and he was able to return home. The date of his death is uncertain, but it was likely near the year 320/938.¹²⁷

He was a prolific writer. There are over sixty works attributed to him, though there is some scholarly dispute as to whether he actually authored some of them. Among the works attributed to him is the *Bayān al-farq bayn al-ṣadr wa-al-qalb* (“Clarifying the Difference Between the Chest and the Heart”). In this work, he establishes a theosophical system that is the basis of his understanding of spirituality. This system deals with the duality of the ‘heart’ and the ‘soul’ and their interaction. It is comprised of four stations: chest, heart, inner heart, and intellect. He uses the terminology of various organs and faculties to discuss the traveler’s mystical ascent through various stages of understanding. This journey proceeds until one relinquishes the ‘self,’ discarding all attachments to this world, and attains the highest spiritual stage: that of unification with the Divine. Far from some of the multivolume encyclopedic works we have discussed thus far, this short but powerful work is considered “the most comprehensive surviving [Sūfī] work of the classical period.”¹²⁸ It is not difficult to notice the great influence of al-Ḥākim al-Tirmidhī on ‘Abdul Qādir al-Jīlānī (see #29). Centuries later the influence of this mystical movement pervaded Islamic societies with the writings of al-Suhrawardī (see #30) and Ibn al-‘Arabī (see #31).

An Arabic edition of al-Ḥākim al-Tirmidhī’s *Bayān al-farq* has been published,¹²⁹ and an English translation is also available.¹³⁰ Two others from among his works have also been translated into English and the interested reader will no doubt find them useful for a better understanding of al-Ḥākim al-Tirmidhī’s life and mysticism.¹³¹

AL-GHAZĀLĪ'S
IHYĀ' 'ULŪM AL-DĪN

(*"The Revival of the Religious Sciences"*)

The biography of al-Ghazālī (d. 505/1111) is mentioned along with the entry for *al-Mustasfā* ("The Purified Essence," see #23), his work on *uṣūl*, which he wrote when he was an active jurist in Nīshāpūr (modern Iran) and before his complete break with the world of academics and government positions. It is during the ensuing renunciant phase in his life that he composed what is widely considered to be his masterpiece, *Ihyā' 'ulūm al-dīn* ("The Revival of the Religious Sciences"). The work is divided into four quarters: religious rituals (ablutions, fasting, pilgrimage, etc.), customs and social norms (eating meals and feeding others, marriage norms, business transactions, etc.), vices (to be avoided in order to purify one's heart), and virtues (to help one progress along the various stages of one's spiritual journey). Each of these four quarters is composed of ten sections, each with various subsections. Altogether, the work serves as a detailed instruction manual for how a religious Muslim should live his or her life in this world so as to succeed in the next. The *Ihyā' 'ulūm al-dīn* is not only al-Ghazālī's literary masterpiece, it is also the work that represents a major peak in the evolution of Ṣūfism in the classical period of Islamic civilization.

Another work that he wrote in this phase of his life was the *Tahāfut al-falāsifah*¹³² (Incoherence of the Philosophers), in which he

severely criticized the Islamic philosophers, and which prompted an equally severe response by Ibn Rushd (Latin ‘Averroes,’ see #72). Note that al-Ghazālī’s repudiation of his former life as a jurist, and his disgust with what he saw as the corruption of the religious scholarly class who monopolized the interpretation of the word of God, did not cause him to abandon God’s laws for pure spiritual mysticism. Indeed, the power of al-Ghazālī’s influence is due in large part to the fact that, in the midst of his severe criticism of the religious scholarly class and within the framework of his ascetic mystical leanings, he continued to maintain the proscriptions of Islamic law. Al-Ghazālī’s elegant synthesis of Islamic theology and Islamic mysticism had a profound influence not only on Islamic societies for centuries to come, but also on medieval Europe, where he was known in Latin as Algazel (see #23).

The *Ihyā’ ‘ulūm al-dīn* is available in numerous Arabic editions,¹³³ as well as in complete English translations¹³⁴ and in a translation of an abridgement.¹³⁵ There are numerous English translations of both individual sections in their entirety,¹³⁶ and of selections from the work.¹³⁷ Also available are excellent scholarly works on al-Ghazālī and his *Ihyā’*.¹³⁸ Two others among al-Ghazālī’s works, his *al-Munqidh min al-dalālāh* (“That Which Delivers from Error”) and his *Bidāyat al-hidāyah* (“The Beginning of Guidance”) have been translated into English.¹³⁹

‘ABD AL-QĀDIR AL-JĪLĀNĪ’S
AL-GHUNYAH LI-ṬĀLIBĪ ṬARĪQ AL-ḤAQQ

(“*The Indispensable [Book] for Seekers of the Way of Truth*”)

‘Abd al-Qādir ibn Abī Šālīḥ al-Jīlānī (d. 561/1166) was born in Nayf, a town in the province of Jīlān, near the southern coast of the Caspian Sea and on the Iranian side of the modern border between Iran and Turkmenistan. Considered by many to have been the greatest Šūfī saint in Islam, there is an abundance of hagiographic literature about his life and works. Some of the most extreme examples of such legends include tales of his piety at such an early age that he even fasted from his mother’s milk, and reports that he was able to walk on water or fly through the air. Such accounts offer little that could be considered accurate historical information, but we do know from more credible accounts that he left his home to study in Baghdad at about eighteen years of age. He studied philology, law according to the Ḥanbalī school of thought, and *ḥadīths*, until he was introduced to Šūfism by a celebrated Šūfī master known for his strict piety and discipline. He graduated through the ranks and at age fifty began public preaching, apparently with great success. He quickly gained many admirers, including financial backers from among the wealthy and devotees from among the poor. He is reported to have converted many Christians and Jews to Islam. Only six years later, he was placed in charge of the school of his former teacher. He taught exegesis, *ḥadīths*, and jurisprudence and appears to have remained in Baghdad until his death in 561/1166. His tomb has been a popular

sanctuary for centuries. In 1535 the Ottoman sultān Sulaymān built over it a mausoleum that remains one of the most visited Šūfī shrines in the world to this day.¹⁴⁰ In 2007, the shrine was targeted by extremists in a car bomb attack that killed and injured dozens of people and caused structural damage.¹⁴¹

His *al-Ghunyah li-ṭālibī ṭarīq al-ḥaqq*¹⁴² (“The Indispensable [Book] for Seekers of the Way of Truth”) is his handbook for the daily life of a believer (according the Ḥanbalī school of thought). It begins with sections on the appropriate way to perform activities of daily living such as eating, drinking, bathing, sleeping, etc., then sections on the knowledge of God and determining the path of right from wrong, followed by chapters on Ramaḍān, daily prayers, etc. He cites qur’ānic verses and *ḥadīths* throughout. The work includes a brief discussion of over seventy varying religious communities, concluding with a description of Šūfīsm. He maintains the orthodox tone of the Ḥanbalī school of thought throughout. Still, more extreme Ḥanbalīs remained critical of some aspects of the mystical Šūfī practices followed by his adherents with the passion of religious fervor. However, their criticisms never reached the level of intensity of those directed towards some other Šūfis, since al-Jīlānī’s writings always emphasized the primacy of the Qur’ān and *ḥadīths*, and presented tempered views on such typical aspects of Šūfī life as ecstatic experience of the divine, asceticism, and the ascendance of Šūfī saints to high ranks in the eyes of God. All of these, for example, he considers permissible, but within reasonable limits and restrictions. For example, he emphasizes maintaining one’s responsibility to family obligations when seeking a renunciant lifestyle, and not attributing to Šūfī saints ranks higher than that of the prophets of God. ‘Abd al-Qādir al-Jīlānī’s disciples and followers eventually formed what is now the eponymous Qādirīyah order of Šūfīsm, with large numbers of adherents in West Africa, India, and Southeast Asia. His *al-Ghunyah* remains one of the most important extant works of Šūfī literature still studied today.

Multiple Arabic editions of the *Ghunyah* are available¹⁴³ but no complete English translations have yet been published. Some selections of his other works are available in English.¹⁴⁴

AL-SUHRAWARDĪ'S
 'AWĀRIF AL-MA'ĀRIF

(“Those Who Understand [Mystical] Knowledge”)

Shihāb al-Dīn 'Umar al-Suhrawardī (d. 632/1234)¹⁴⁵ was born in Suhraward, a village near Zanjān, (in the northwest of modern Iran). At a young age he traveled to Baghdad to study with his uncle, Abū al-Najīb al-Suhrawardī, who was teaching at the famous Nizāmīyah school and leading his own Ṣūfī circle. He also studied with 'Abd al-Qādir al-Jīlānī (see previous, #29), who, as a respected elder, made a profound impression on the young Suhrawardī, especially in discouraging him from pursuing studies of Ash'arī theological works and works of *kalam* (use of Greek logic in theology). This may have played a role in his harsh attacks on *kalam* and dialectical theology later in life. After his uncle's death, he began leading the Ṣūfī circle formerly headed by his uncle. He attracted large audiences as an orator and preacher. He is known to have maintained correspondence with Fakhr al-Dīn al-Rāzī (see #7 and #24). He took a severe stance against his Andalusian Ṣūfī contemporary, Ibn al-'Arabī (see #31, next) for being influenced by Greek philosophy. There are numerous accounts of his meeting with various famous personages of his time, including Ibn al-'Arabī, though many of these accounts are likely at least partially, if not entirely, fabricated. Better documented is his relationship with the caliph al-Nāṣir (r. 575-622/1180-1225), who took an extraordinary interest in al-Suhrawardī, founding a Ṣūfī lodge and actively promoting al-

Suhrawardī's branch of Ṣūfism. Both the caliph's influence in Ṣūfī circles and al-Suhrawardī's popularity and prestige among the general population expanded significantly. The caliph even sent al-Suhrawardī as emissary to rulers at the courts of the Ayyūbī, Khwarazmshāh, and Saljūq dynasties. His views were spread by his disciples to Syria, Anatolia, Persia, and North India, forming the famous Suhrawardīyah Ṣūfī order. He died in Baghdad in 632/1234 at the age of ninety and his tomb has been venerated for centuries.¹⁴⁶

His most important work is the *ʿAwārif al-maʿārif*¹⁴⁷ ("Those Who Understand [Mystical] Knowledge"). It contains sixty-three chapters, beginning with those defining and explaining the significance of mystical knowledge, various branches of mysticism, identifying the true mystics from those who are not, and progressing to chapters on the particulars of Ṣūfī lodges, clothing, forty-day ascetic retreats, etc. The content may be categorized into five major themes: the definition of mysticism, its institutions and rituals, the characteristics of a good mystic, appropriate behaviors of one, and the mystical spiritual journey. The work constitutes a comprehensive guidebook for how to live a Ṣūfī way of life. The work features elements of earlier Ṣūfī literary works, including Ṣūfī exegetical literature, Ṣūfī biographical dictionaries, and numerous earlier Ṣūfī handbooks. The widespread influence of al-Ḥākim al-Tirmidhī (see #27) in the intervening three centuries having paved the way, al-Suhrawardī's *ʿAwārif al-maʿārif* represents the culmination of increasingly systematized mystical thought in Islam. It is considered to be the "last classical handbook of Ṣūfism."¹⁴⁸ The work had a profound influence on both the lay populace and the scholarly class of the time. Its influence was such that, even within the author's lifetime, translations of the work were made into Persian, and it was not long before translations into other languages followed. It continues to be used as a Ṣūfī handbook among the followers of Islamic mysticism to this day.

Several published editions of al-Suhrawardī's *ʿAwārif* are available in the original Arabic.¹⁴⁹ There are no English translations, *per se*. However, in British colonial India a translation into English was made of the Persian *Miṣbāḥ al-hidāyah wa-miṣṭāḥ al-kifāyah*¹⁵⁰

(“The Lamp of Guidance and the Key to Sufficiency”), which is itself not a translation of the *‘Awārīf*, but contains many of al-Suhrawardī’s essential teachings. An English translation of a later commentary on the *‘Awārīf* is available,¹⁵¹ as is a study of the spiritual practices of the Suhrawardī order.¹⁵²

IBN AL- ‘ARABĪ’S
AL-FUTŪḤĀT AL-MAKKĪYAH

(“*The Meccan Revelations*”)

Muḥammad ibn ‘Alī ibn Muḥammad ibn al-‘Arabī’s (d. 637/1240, known as Muḥyi al-Dīn) biography has been mentioned in the section on his commentary (see #8), as has his influence in Persia, India, Anatolia, and medieval Europe. His most famous and perhaps most important work is his *al-Futūḥāt al-makkīyah* (“The Meccan Revelations”), which presents the entirety of his mystical Ṣūfī beliefs. Having taken thirty years to complete, it is the most monumental and encyclopedic work of spiritual and intellectual thought in Islamic mysticism ever written. It encompasses metaphysics, cosmology, jurisprudence, philosophy, history, exegesis, *ḥadīths*, visions, meditations, and more. The second version of this work, which is what Ibn al- ‘Arabī taught during his lifetime, comprised thirty-seven volumes, divided into six sections and five hundred and sixty subsections. He begins with an introduction comprised of meditations on the ‘reality’ of existence and its manifestations, discusses various types of knowledge, including prophetic knowledge, and delves into intense criticism of theologians and philosophers in their approaches to spiritual knowledge. He then explains his own theories of spiritual worship. The first section is on ‘understandings,’ the second on ‘transactions,’ but unlike the typical chapters on transactions in books of law, he emphasizes behavior,

spiritual advancement, and interactions with God. The third section is on 'states of being,' the spiritual states of mystical experience as one progresses towards true knowledge of the Divine. The fourth is on 'descent' and focuses on the intersection between human and divine in worship. The fifth is on progressive 'meetings' between the human and the Divine as one advances in one's understanding of reality. The final section is on 'stations' that one passes on the journey towards unity with the Divine.

His mastery of the scholarly disciplines of his time is evident throughout his writing, as he incorporates Qur'ān, *ḥadīths*, theology, and philosophy in the presentation of his mystical views. He is the principal proponent of a concept that was later articulated as the 'unity of being:' that everything in the world is simply a manifestation of the Divine. Even though by this century, the influence of earlier Ṣūfīs such as al-Tirmidhī (see #27) had become widespread and Ṣūfism was already one of the well-established currents within Islamic society, such themes as monism of the Divine Being provoked the disdain of extremists among the opposing current of religious orthodoxy. Some went so far as to say that Ibn al-ʿArabī could not even be considered Muslim because of such 'blasphemy,' while his defenders countered that the extremists' literal understanding of his writings proves their inability to grasp the subtleties of meaning in spiritual writings of such intellectual depth. This debate, heated even during Ibn al-ʿArabī's own time, continues within the Muslim community today.

Numerous Arabic editions of Ibn al-ʿArabī's *Futūḥāt* are available.¹⁵³ There are also several English translations of selected portions of the *Futūḥāt*, but there is not yet any complete English translation of this monumental work. Several translation projects are underway.¹⁵⁴ The interested reader will find a wide variety of translations of other works by Ibn al-ʿArabī in prose¹⁵⁵ as well as translations of his poetry.¹⁵⁶ There are also many scholarly works on his life, works, and influence.¹⁵⁷

ABŪ AL-ḤASAN AL-ASH‘ARĪ’S
KITĀB AL-LUMA‘ FĪ AL-RADD ‘ALĀ
AHL AL-ẒAYGH WA-AL-BIDA‘

(*“The Book of Brilliance in the Rebuttal against
the People of Deviation and Innovation”*)

‘Alī ibn Ismā‘īl al-Ash‘arī (d. 324/935-6, known as Abū al-Ḥasan) was born in Baṣrah (modern Iraq) and was a direct descendant, nine generations removed, of the famous Abū Mūsā al-Ash‘arī (d. 52/672), companion of the Prophet and participant in the early civil wars. We do not know much of his early life, but we know that he was a prominent student of the Mu‘tazilī scholarly circles in his hometown, where he was active in the techniques of rational theological argument against traditionalists. At about forty years of age, he is reported to have had a conversion experience. While there are multiple versions describing the episode, in essence, he is reported to have seen a dream during the holy month of Ramaḍān, in which he was instructed by the Prophet Muḥammad to maintain Muḥammad’s true prophetic traditions. After this vision, al-Ash‘arī renounced his Mu‘tazilī affiliations and joined their opponents: the orthodox traditionalists known for their strict reliance on only qur’ānic scripture and *ḥadīths* for resolution of theological problems. Exceptional as a new member among this community of traditionalists who opposed rationalism, Abū al-Ḥasan al-Ash‘arī was uniquely skilled with his decades of experience in rational argumentation. In

spite of joining the anti-rationalist theological camp, he could not resist rational argumentation. But instead of using rational arguments to disprove the positions of the anti-rationalists, he employed rational arguments to disprove the positions of the rationalists themselves, turning the Mu'tazilīs' own weapon (logic) against them. He eventually moved to Baghdad, where he died in 324/935-6.¹⁵⁸

His *Maqālāt al-islāmīyyīn wa-ikhtilāf al-muṣallīn*¹⁵⁹ ("The Sayings of the Muslims and the Differences Among Those Who Pray") is a heresiography that appears to have been composed prior to his conversion experience. It is his *Kitāb al-luma' fī al-radd 'alā ahl al-zaygh wa-al-bida'*¹⁶⁰ ("The Book of Brilliance in the Rebuttal against the People of Deviation and Innovation") that marks a turning point in the intellectual confrontation between the Mu'tazilī rationalists and the orthodox traditionists. It is a short work that begins with a very brief introduction composed of one sentence of perfunctory formalities in praise of God, followed by another sentence explaining that the text was composed in response to a request for a book that "clarifies the truth and triumphs over falsehood."¹⁶¹ The work is structured in a question-answer format, with each theological question posed subsequently addressed by a response defending the traditionist position on the various matters discussed. The issues are organized into ten sections, beginning with one on God and His attributes. Subsequent sections proceed thematically with discussions on the Qur'ān and the will of God, the will of God encompassing all things, dreams and visions, predestination, free will, attributing to God justice and injustice, faith, the specific and general, and [God's] promise and warning, ending with a brief section on leadership.

Although he was not the first to have used the Mu'atizlīs' own methods of logical argumentation against them, Abū al-Ḥasan al-Ash'arī seems to have been the first to succeed in gaining the acceptance of much (though not all) of the traditionist camp in doing so. In spite of his explicit adoption of traditionist theological positions, some extremist traditionists such as those of the Ḥanbalī school, who insisted that God's laws are above the scope of human reason, continued to attack him for his use of rational argument in

theological matters. Nevertheless, the momentum of history was already shifting and the broader orthodox community began to accept al-Ash‘arī’s defense of orthodoxy, even if it meant using non-orthodox methods. With time, the initially unorthodox methods gradually became acceptable to orthodoxy and use of the rational argumentation techniques of philosophers became common practice among scholars of theology, regardless of the theological positions they held. This led to some of the most distinguished literary contributions to our collective human intellectual enterprise, such as those of al-Ghazalī (see #23, #28) and Fakr al-Dīn al-Rāzī (see #7, #24). This seismic shift in the intellectual approach to theology can be traced to the success of the *Kītāb al-luma‘* (“The Book of Brilliance”) by al-Ash‘arī, one of history’s uniquely idiosyncratic talents.

There are several Arabic editions of al-Ash‘arī’s *Kītāb al-luma‘*,¹⁶² as well as an English translation available.¹⁶³ Another major work attributed to al-Ash‘arī, but with questionable authenticity, is his *Ibānah ‘an uṣūl al-diyānah*¹⁶⁴ (“Elucidation of the Foundations of Religion”), which has also been translated into English.¹⁶⁵

ABŪ JA‘FAR AL-TŪSĪ’S
KITĀB AL-KHILĀF

(“*The Book of Differences [in Law]*”)

There are several early works that address discrepancies in various aspects of Islamic law. Some focus on differences between the traditions of specific scholars by geographic school, such as between the scholars of Iraq and those of Medinah. Others address differences between specific scholars, such as between Mālik ibn Anas (see #10) and al-Shāfi‘ī (see #21) or even between specific narrators of *ḥadīths*. Yet others, such as *Ta’wīl mukhtalif al-ḥadīth*¹⁶⁶ (“The Interpretation of Varying *Ḥadīths*”) by Ibn Qutaybah (d. 276/889, see #41), attempted to remedy discrepancies between varying strands of *ḥadīths* themselves. The earliest attempt at addressing specific comparative jurisprudential issues comprehensively appears to have been al-Ṭabarī’s (see #3) *Kitāb ikhtilāf al-fuqahā*¹⁶⁷ (“The Differences Among the Jurists”), an apparently large and comprehensive work that included many extracts from scholarly works available to the author and which preserves excerpts of texts from works no longer extant. Unfortunately, much of this large work has been lost and only a remnant survives. A partial English translation comprising the section on *jihād* has been published.¹⁶⁸ Another classical work, by al-Qāḍī al-Nu‘mān, (d. 363/974) gives a distinctly Fāṭimī Ismā‘īlī perspective in addressing sources of law (rather than in comparing rulings on specific legal cases) and has been translated into English.¹⁶⁹

The earliest surviving work in the same vein as al-Ṭabari's *Ikhtilāf* and published in its entirety is Abū Ja'far al-Tūsī's *Khilāf* ("Differences"). It was followed later by works such as Ibn Hubayrah's (d. 560/1165) *Ikhtilāf al-a'imma al-ulamā'*¹⁷⁰ ("Differences Between Leading Scholars") and Ibn Rushd's (see #72) *Bidāyat al-mujtahid*¹⁷¹ ("The Beginnings of the Jurisprudent"), which is also available in English translation.¹⁷² Unique among others in this list, al-Tūsī's work is the earliest comprehensive comparison of specific issues of law between the major schools of thought to survive in its entirety and to include the views of all of: the four surviving Sunnī schools of thought, other Sunnī schools of thought that were active at al-Tūsī's time but which are now extinct, and the Twelver Shī'ī school of thought.

A brief biographical summary of Muḥammad ibn al-Ḥasan al-Ṭūsī (d. 459-60/1066-7, known as Abū Ja'far) has already been provided (see #4). Worthy of reiterating here is the fact that, before coming to Iraq, he was born and raised in the Shāfi'ī milieu of early Islamic Khurāsān and was steeped in Shāfi'ī tradition throughout his early upbringing and the formative years of his education. As a result, he was intimately familiar with the Sunnī scholarly tradition in general, and with the Shāfi'ī school of thought in particular. This, in combination with his later education among the most prominent Shī'ī scholars of Iraq made him uniquely qualified to address questions of comparative law.

His *Kitāb al-khilāf*¹⁷³ ("The Book of Differences [in Law]") is a comprehensive multivolume work encompassing nearly every aspect of Islamic law, beginning with a chapter on ritual purity and proceeding through subjects such as prayer, funerary rituals, charity, fasting, pilgrimage, business transactions, marriage and divorce, murder and blood-money, punishments, theft, hunting and ritual slaughter of animals, dietary laws, etc. Organized under the above chapter headings and relevant subchapters are individual case studies on very specific issues (numbered in the printed edition for ease of reference and totaling 4,172 legal issues). In dealing with each issue, the author presents a legal matter, followed by the legal opinions of various (Sunnī) scholars, then presents the source(s) of his conclusion

and evidence supporting that conclusion either in qur'ānic text, *ḥadīths*, or in tertiary or quaternary source of law. For example, issue #359 states:

A Friday congregational prayer is possible with [a minimum of] five people, but seven is preferable. And al-Shāfi'ī [see #21] states, 'it cannot be performed with any less than forty people,' and the same was said by 'Ubayd Allah ibn 'Abd Allah ibn 'Utbah ibn Mas'ūd and 'Umar ibn 'Abd al-Azīz from among the followers [generation that followed the companions of the Prophet], and by, among the scholars, Aḥmad [ibn Ḥanbal, eponymous founder of the Ḥanbalī school of thought] and Ishāq. And Rabī'ah said 'twelve people and not less.' And al-Thawrī and Abū Ḥanīfah [eponymous founder of the Ḥanafī school of thought] and Muḥammad said, 'four people, one leading the prayer and three following, and not less'. And al-Layth ibn Sa'd and Abū Yūsūf said, 'three people, with the third among them being leader, and not less, because that is less than the [definition of a] plural. And al-Ḥasan ibn Ṣāliḥ ibn Ḥayy said 'it can be performed with two people,' and al-Sājī said, 'Mālik [ibn Anas, see #10] did not mention anything about this issue. And our evidence is: *ijmā' al-firqah* (the consensus of our group).

Then al-Ṭūsī proceeds to provide *ḥadīths* in supporting his position that a minimum of five participants is necessary for a Friday congregational prayer.¹⁷⁴

The comprehensive nature of this work, its unbiased inclusion of information from all major Sunnī and Shī'ī sources available to the author, its early date, and the fact that it has survived in its entirety, all make al-Ṭūsī's *Khilāf* an indispensable source for the study of comparative Islamic law. A complete Arabic edition has been published, as well as abridgements.¹⁷⁵ No English translations are yet available. However, for interested readers, a detailed scholarly study on the diversity of opinions in medieval Islamic law is available in English.¹⁷⁶

IBN HAZM'S
AL-FIṢAL WA-AL-MILAL

(*"Divisions among Religious Communities"*)

‘Alī ibn Aḥmad ibn Sa‘īd, known as Ibn Ḥazm (d. 456/1064), was born in Cordova (modern Spain) to a family with origins probably as Christian converts who settled in the city some time in his grandfather’s generation. His father achieved some rank in local government administration and even became minister to al-Manṣūr ibn Abū ‘Āmir (d. 392/1002, known as Almanzor in Spanish, the ruler ‘behind the throne’ during the peak of Muslim power in Andalusia) as well as to al-Manṣūr’s son. Ibn Ḥazm’s early life was spent around the harem, where he had, as one would expect, a fairly pampered childhood. His fortunes changed dramatically at the impressionable age of fourteen, when the political winds shifted. He witnessed the violent fall of the Andalusian caliphate, the subsequent disintegration of Andalusia into petty kingdoms, and the beginning of a turbulent era known as the ‘Ṭā’ifah’ period. His father fell from grace, was expelled from the palace, imprisoned, and his property confiscated. When his father participated in a failed movement against those who imprisoned him, he was killed. The family’s home was destroyed and Ibn Ḥazm was forced to flee. He was relatively safe for four years until the local governor accused Ibn Ḥazm of being loyal to the former caliphate, imprisoned him for a time, then banished him. Before long, he heard that a claimant to the throne was raising an army to retake Cordova and to restore the caliphate.

Ibn Ḥazm joined the claimant to the throne, became his minister, and joined his army, but when they were defeated, Ibn Ḥazm was taken prisoner at Granada and the claimant executed. After his release from prison, Ibn Ḥazm began to write his *Ṭawq al-ḥamāmah*¹⁷⁷ (“The Ring of the [Ring-Necked] Dove”), perhaps the most important treatise on love ever written in Arabic, in which he mentions these events. When the ruler of Cordova was eventually overthrown and a new caliph took power, he appointed the former minister, Ibn Ḥazm, once again in a ministerial role. Only weeks later, the new caliph was assassinated and Ibn Ḥazm was imprisoned once more. Four years later, disillusioned with political life, Ibn Ḥazm retreated into semi-retirement. However, his intellectual attacks on Mālikī religious scholars (who dominated Andalusia at the time), combined with his fierce loyalty to the caliphate and his attacks on the rulers of the petty kingdoms that reigned after the fall of the caliphate, earned him enemies on all sides. He returned to his ancestral lands at the village of Manta Līshām (Montija, near modern Huelva, by ‘the great western sea’) where he spent the last four decades of his life focused on studying and writing. He was forbidden from teaching groups of students so only an occasional brave disciple came to him individually until he died in 456/1064.¹⁷⁸

His experiences in the first half of his life undoubtedly had a tremendous impact on his thinking and his writings in the latter half. From his early years among the women of the harem he gained a profound understanding of feminine psychology as well as a level of sensitivity and a passion for deeply held beliefs unparalleled among many of his peers. His adult years among men whose insatiable lust for power, boundless deception, bloodthirst, and cruelty taught him of the machinations of men in positions of religious and political power. This combination bred in him an acute sense of truth and the passion for defending it. He became convinced that those in power twist language to serve their own ends and, as a result, aimed for precision, consistency, and clarity in all his writings. Throughout his works, he insists on accepting the explicit meaning of language (especially scripture) and his opposition to all forms of interpretation

seeking hidden meanings other than the obvious literal one. He was not against the use of Aristotelian logic as some religious scholars were, but insisted on its subservience to what was naturally obvious in the language of scripture. He resisted fiercely the philosophers' attempts to submit the word of God to the constraints of human rational arguments.

He is perhaps most famous for his *Ṭawq al-ḥamāmah*¹⁷⁹ ("The Ring of the [Ring-Necked] Dove"), a treatise on love and lovers. It is a masterfully written and cleverly original treatment of a subject eternally popular with writers and poets. Here he reveals deep psychological and moral truths, as well as a profound understanding of human behavior, highlighting the differences between our true selves and our outward masks. His religious writings reflected this view as well, with books such as his *al-Muḥallā bi-al-āthār*¹⁸⁰ ("Embellished by History"), promoting a return to the original basic laws of the Qur'ān and the Prophet, and shedding the legal complexities and convolutions that various schools of thought compounded over the centuries. Interestingly, as a result of his insistence on returning to the qur'ānic and Muḥammadan roots of Islamic law, his views were fairly liberal (for example, on such matters as the rights of women). This exoteric approach made Ibn Ḥazm the ultimate representative of what was to become the *Zāhirī* (manifest, obvious) school of thought in Andalusia. Another prominent Andalusian, the mystic Ibn al-'Arabī (see #8) was an ideological proponent of Ibn Ḥazm, and even wrote a summary of Ibn Ḥazm's *Muḥallā*. Ever faithful to this spirit of transparency of our true selves, Ibn Ḥazm was never reticent in his criticism of other Sunnī schools of thought, including Shāfi'ī, Ḥanafī, and the locally dominant Mālikīs of Andalusia and North Africa, not to mention his attacks on the Shī'īs and other groups.

His *Kūtāb al-fīṣal fī al-milal wa-al-ahwā' wa-al-niḥal* ("Book of Divisions among Religious Communities and Sects and Creeds") is a comparative analysis of religious ideas. His wide-ranging research into the beliefs of other faiths and sects is obvious as the book's contents are based on not only his literary research, but also from

firsthand information that he was able to collect from contemporaneous scholars among various religious communities in Andalusia. The work begins with a brief introduction of only a few paragraphs. In it, he discusses the weaknesses of earlier works on the subject and his intention to produce an accurate accounting of the beliefs of other faiths and a clear, articulate response proving the superiority of Islam. The author then delves into some preliminary philosophical discussions on matters such as attainment of the truth, creation of the world, absolute space and time, prophethood and angels, etc., before proceeding to sections on various faiths such as Judaism, trinitarian Christianity, Sabianism and Zoroastrianism. After sections on biblical prophets from Adam to Solomon, he discusses Muḥammad, and then some theological issues such as the creation of heaven and hell, eternal reward and eternal punishment, and intercession and leadership. He then begins an Islamic heresiography with sections on the ‘disgusting’¹⁸¹ beliefs of the Shīʿīs, Khārījīs, Muʿtazilīs, and others. The work serves essentially as an “encyclopaedia of religious knowledge, concerning the different religions which had, or had formerly had, any connexion with Islam. The fullness and accuracy of its documentation certainly class it as a historical work.”¹⁸² While clearly biased towards Islam, he does not willfully misrepresent the views of other faiths. True to form, Ibn Ḥazm presents a relatively objective picture based on the evidence available to him. As such, Ibn Ḥazm’s *Kitāb al-fīṣal* represents the first true work of comparative theology in Islamic civilization.

The *Fīṣal* is available in several Arabic editions,¹⁸³ but not yet in a complete English translation. There is, however, an English language translation of the portions dealing with Shīʿī heresiography,¹⁸⁴ as well as a translated selection of Ibn Ḥazm’s treatment of the Gospel of Matthew.¹⁸⁵ A complete Spanish translation of the *Fīṣal* is available.¹⁸⁶ His *Ṭawq al-ḥamāmah* is available in English translation¹⁸⁷ and in Spanish translation as well.¹⁸⁸ Also available in English are a scholarly work on his moral theology that includes an English translation¹⁸⁹ of his *al-Akhlāq wa-al-siyar* (“Moral Behavior”),¹⁹⁰ a work on Ibn Ḥazm that includes an English translation of his *Marātib*

al-ʿulūm (“Categories of the Sciences”),¹⁹¹ and a translation of a selection from his *al-Ihkām fī usūl al-aḥkām*¹⁹² (“Precision in the Sources of [Legal] Decisions;” not to be confused with #25, which shares the same title). Ibn Hazm and his Andalusian milieu have been studied extensively by the late Ihsan Abbas¹⁹³ and a number of other scholars.¹⁹⁴ Also available are works on the relationship between Hispano-Arabic poetry and the European troubadour tradition,¹⁹⁵ including selected English translations, as well as studies of Arabic influences on European love poetry and on literature in general.¹⁹⁶

I I

A D A B

INTRODUCTION TO PART II

Having explored the religious and spiritual subculture of Islamic civilization in the previous section, this next section delves into the second of the three major cultural trends in the literary corpus of Islamic civilization: that of *adab*. In its primitive pre-Islamic meaning, the word *adab* denoted a sense of habitual custom or norm of conduct, but by the early centuries of Islam it began also “to imply the sum of knowledge which makes a man courteous and ‘urbane’.”¹⁹⁷ It came to be associated with what we might today call secular intellectual culture. *Adab* cultural circles were generally areligious but not necessarily irreligious. While prose literature, proverbs, genealogy and history were important, the heaviest emphasis was on poetry and oratory. As a result, disciplines related to language and the use of language, such as grammar and lexicography also gained prominence. After the emergence of this broadly defined literary humanism during the cultural zenith of the high ‘Abbāsī period, the term *adab* came also to designate more specifically the knowledge and administrative protocols of those holding offices such as court secretaries, judges, ministers, and the like. With the expansion of the empire eastward and exposure to the epic traditions of Persia and India, Arabic historians began to record their own histories¹⁹⁸ and this literature further expanded the field of *adab*.

It is important to note the role of literature itself in the florescence of high culture in the early Islamic period, which witnessed a remarkable confluence of various otherwise independent historical factors. The parched thirst of a new society yearning for knowledge of the broader world, sudden exposure to the literary heritages of recently conquered civilizations, and the arrival from China of a new technology that allowed for more efficient transfer of that knowledge all combined to create a literary culture of book production and consumption the likes of which the world had never before known. Beginning with the qur’anic injunctions on reading and writing, early Islamic society’s focus on the written word of God as the foundation of early childhood education encouraged the rise

of literacy in a formerly largely illiterate Arab tribal society. The early Islamic conquests out of the Arabian Peninsula and expansion into the territories of neighboring civilizations such as Persia, Byzantium, and Egypt exposed the fledgling Islamic civilization to a knowledge base that was, for the most part, previously inaccessible. Finally, the initial arrival of paper technology from China, followed by the transformation of paper-making from a niche craft to a major local industry, provided the technical medium that would foster an unprecedented social transformation. Simultaneous with these developments were the formation of a scribal and administrative class as well as advances in bookbinding and bookmaking, resulting in a society in which books and libraries were a part of daily life in every major population center. This “explosion of books and book learning”¹⁹⁹ transformed this society that spanned three continents in a manner not unlike that which was to be repeated centuries later by Gutenberg’s introduction of moveable type to Europe.

We begin this section on *adab* literature with some of the most basic works focused on the Arabic language itself. Beginning with the earliest work on Arabic grammar, the foundational but untitled work known simply as ‘The Book of Sibawayhi,’ entries examined include works on grammar and morphology of the Arabic language. These are followed by some of the most important works of phonology and philology. Also included are some of the most important examples of Arabic lexicography.²⁰⁰ These early foundational works and exhaustive dictionaries served as the linguistic cornerstone of the literary and cultural transformation of classical Islamic world.

The next subsection consists of more entries than any other, as it is comprised of many varied examples of *adab*, broadly defined. These include literary anthologies and other works covering poetry, prose, oratory, and song, as well as exemplary works on administrative protocols and literary stylistics. These entries begin with the undisputed Arabic literary master, al-Jāḥiẓ, followed by exemplary literary collections compiled by authors from the central lands, as far West as Andalusian Spain and as far East as Persianate Central Asia. These

monumental collections sometimes mirror the immensity of the empire whose literary examples they attempt to compile and collate. Included in this section are also entries for some remarkably popular and entertaining literary works that were so culturally influential that they spawned imitations not only in Arabic but in Hebrew and other languages as well. Some examples have also been included of administrative works of literary value, as well as literary works composed and compiled by authors who were active in government administration and thereby privy to anecdotal information rarely accessible outside courtly administrative circles. While much *adab* was areligious, the literature was not necessarily anti-religious, and some examples are even written by authors we have already introduced in part I, with their literary compilations in this section completing and complimenting their religious works mentioned in the previous section. Our selection of examples in the general *adab* category is concluded by a masterpiece of Arabic literary criticism from the classical period.

The next several entries are grouped independently from the general category of the ‘literary’ because there is nothing as particularly self-defining in traditional Arabic culture as poetry. In their own literature, it is “cited by them as their own most important characteristic and one that distinguishes them from all other peoples. This evaluation is corroborated by the extraordinary influence exerted by Arabic poetry in form and content on all the poetic literatures which came in contact with it... and even in the West it left its traces in the beginnings of the poetry of the Romance languages.”²⁰¹ Several exemplary poets and poetry collections have been chosen from among the many luminaries of Arabic poetry. These span the centuries of the classical period and are as varied in content as in style: from the unabashed hedonism of Abū Nuwās to the ‘new’ style of Ibn al-Mu‘tazz, from the moralistic stoicism of al-Mutanabbī to the Arab ideal of chivalry embodied by Abū Firās, and to the astute perceptions of the blind and vegan al-Ma‘arrī, who deliberately avoided common classical Arabic poetic themes.

The explosive fluorescence of literary activity that is the theme of this work, and particularly of this section on *adab*, cannot ignore

the major bibliographical works of the classical period. While there are many such works, three exemplary indices have been chosen: the earliest and most complete general bibliographic index of the classical period covering nearly every possible subject, the earliest surviving bibliographic index of Shīʿī works largely ignored and unrecognized by the broader Sunnī community, and a major bibliographic index of the works in the libraries and private collections of Andalusian Spain, far removed from the intellectual centers of the central Islamic lands.

We conclude with a sampling of some of the most important early histories in Arabic. Beginning with the earliest source of reports about the biography of Muḥammad, the source that helped to shape the early community's understanding of itself and its role in the world, several examples of works are provided spanning seven centuries of historians and spanning multiple religious, political, and geographical perspectives. The final entry in this section is that of arguably one of the world's most ingenious writers, who, after being discovered by Europeans, has been recognized for intellectual contributions not only in the study of history, but also in sociology, economics and other disciplines.

Worthy of reiterating here is the difficulty of selecting a small sampling of only thirty-three representative books from the vast corpus of thousands of illustrious examples of Arabic literary works in numerous genres. I hope that the selections described here provide readers with such a vivid glimpse of the variegated richness of Arabic literature that they will be compelled to pursue further exploration.

SĪBAWAYHI'S

*AL-KITĀB**("The Book")*

‘Amr ibn ‘Uthmān ibn Qanbar (d. ca. 180/796, often referred to as Abū Bishr) was a tribal client of the Banī Ḥārith ibn Ka‘b tribe and is more commonly known simply as “Sībawayhi.” He was reportedly born to a Persian family in al-Bayḍā’ (near Shīrāz in modern Iran). There are stories that he left his hometown and traveled to Baṣrah (modern Iraq) to study *ḥadīth* and jurisprudence, but was so embarrassed by his weakness in the Arabic language that he was shamed into studying Arabic grammar instead. Sources also list a number of teachers and other possible influences. However, aside from the fact that he is “the author of a single, untitled work... acknowledged as the founding text of Arabic grammatical science,”²⁰² we know very little else about him that is reliable. He is presumed to have died sometime around the year 180/796 at no more than thirty or forty years old.²⁰³

The untitled book that he has left us is commonly referred to simply as *Kitāb Sībawayhi* (“The Book of Sībawayhi”). It has been well established for centuries as the foundational work of Arabic grammar. Because of its early date and because the book itself is the only evidence for what it reports (see #1 for problematic issues historicizing the earliest Arabic literature), there remains much scholarly speculation regarding the origins of Arabic grammar, including theories of Greek

(via Syriac) influences and the influence of such factors as early legal reasoning on Sībawayhi as he composed his grammar.²⁰⁴

With this book, Sībawayhi systematically and meticulously organized contemporaneous Arabic grammar. The book's basic structure has been followed by all Arabic grammars since. The text is divided into three main sections: syntax, morphology, and phonology. After some introductory sections, the book begins with a discussion of syntax and divides all words into one of three categories: nouns, verbs, and particles. The next section, on morphology, comprises nearly half of the book. It covers the various patterns for nouns, verbs, and particles. Declension, gender, duals, plurals, and verb derivations are examined, among other matters. The final section, on phonology, focuses on the distinctive phonemes of the Arabic language, gives detailed descriptions of articulation, dialectal variations, and related matters. Sībawayhi compiled information not only from the experts of his time, but also conducted his own research by investigating the actual language usage of the nomadic desert Bedouin, who were viewed as the 'original' Arabs who spoke pure, unadulterated Arabic. Sībawayhi's book remains distinguished as the foundational text in Arabic grammar. It was "the beginning of the Arabic linguistic venture."²⁰⁵ Its influence is such that it continues to be imitated by modern grammar texts today. Moreover, not only was it the first Arabic book on Arabic grammar, it was also *one of the first books ever written in Arabic*. As such, it certainly deserves its place as the first work in this section on the florescence of Arabic literature.

Numerous Arabic editions of Sībawayhi's al-Kitāb are available.²⁰⁶ No complete English translation has yet been published, but selections have been translated and analyzed.²⁰⁷ There are also numerous scholarly works on Sībawayhi and his work.²⁰⁸

IBN AL-SIKKĪT'S
ISLĀḤ AL-MANṬIQ

(*"The Rectification of Speech"*)

Abū Yūsuf Ya'qūb ibn Ishāq (d. 244/858, known as Ibn al-Sikkīt) was born in Baghdad to a family native to Dawraq in Khūzistān (modern Iran). His early education began with lessons from his father, who was an expert in poetry and lexicography, and continued with other well-known teachers. He spent time living with the desert Bedouin, as did many in that era who wanted to familiarize themselves with 'pure' Arabic language. His mastery of philology and lexicography earned him a teaching position in Baghdad. He was so well-known for his expertise that he was called upon by the caliph al-Mutawakkil (r. 232-247/847-861) to educate his two princes at the palace. Unfortunately, Ibn al-Sikkīt's lack of reticence regarding his own political allegiances appears to have cost him his life. He was fifty-eight years old in the year 244/858, when the caliph ordered royal troops to trample Ibn al-Sikkīt to death.²⁰⁹

He wrote approximately twenty books, mostly on various aspects of poetry, prose, language, and linguistics. His simply-entitled *Kūtab al-alfāz*²¹⁰ ("The Book of Terms"), is an early work of lexicography that is part dictionary and part thesaurus, providing definitions and synonyms, organized by subject matter (love, morning time, bravery, etc.). The 2nd/8th century witnessed a perfect confluence of factors not unlike what would be experienced six hundred years later in

Gutenberg's Europe. The arrival of paper technology from China and development of a local paper industry combined with the expansion of empire and absorption of multiple intellectual traditions resulted in an explosion in literary activity. However, since written Arabic rarely includes short vowel markers, it remained possible for the literate, but less educated, to confuse two words pronounced completely differently but written identically (when short vowel markers are excluded). As a result, the increased literary activity saw a similar increase in the misreading of texts. Ironically, to counter this increasing and disturbing trend, the philologists of the era wrote books on how to read books properly. There were so many such texts that this became a genre unto itself.²¹¹ Ibn al-Sikkīt's *Iṣlāḥ al-manṭiq* ("The Rectification of Speech") stands out among others in this genre for its high quality and accuracy. In addition, its organization and presentation made for superior ease of use. Its reputation as a reference for morphological and lexical details of the Arabic language was already firmly established in the classical period and it remains essential in the library of any serious Arabist even today.

Several Arabic editions of Ibn al-Sikkīt's *Iṣlāḥ al-manṭiq* have been published,²¹² but no English translation is yet available.

IBN DURAYD'S
AL-ĴAMHARAH FĪ AL-LUGHAH

(*"The Massive Collection on Language"*)

Abū Bakr Muḥammad ibn al-Ḥasan al-Azdī (d. 321/933, known as Ibn Durayd) was born in Baṣrah (modern Iraq) to a well-to-do family of the Azdī tribe of Oman. His uncle hired for him tutors for his early education and he later continued his studies with some of the most famous scholars of the Baṣrah school of thought. When he was thirty-four years old, during the Zanjī rebellion, both he and his uncle managed to flee the city before it was sacked in 257/871. He lived in Oman for the next twelve years and traveled to several of the islands of the Gulf. The father of one of his students became governor of Ahvāz and Fārs (both in modern Iran) and invited him there as a teacher. (Ibn Durayd dictated the *Ĵamharah* to this student). When the governor died, Ibn Durayd settled in Baghdad, where he received fifty gold *dīnārs* per month as a teaching stipend from the caliph al-Muqtadir (r. 296-213/908-929). He was renowned for his expertise in Arabic language and poetry and attracted many students, among them several who themselves became notable names in literature (for example, Abū al-Faraj al-Isfāhānī, #44). And he was a contemporary and acquaintance of other renowned scholars in Baghdad at the time, such as al-Ṭabarī (see #3). Ibn Durayd died at Baghdad in the year 321/933, nearly a centenarian.²¹³

Among his well-known works are his *al-Ishtiqāq*²¹⁴ (“Etymology”), which details the etymology of a large number of Arabic proper names, and his *al-Malāḥin*²¹⁵ (“Linguistic Convolutions”), which delineates hundreds of ambiguous terms, but his largest and perhaps most important work is his Arabic dictionary, *al-Jamharah fi al-lughah* (“The Massive Collection on Language”). The voluminous *al-Jamharah* was criticized by the author’s enemies for it made copious use of earlier sources. Nevertheless, its organization differs and it contains information not found in other dictionaries. It also includes many non-Arabic loanwords that entered the language, along with their etymologies. After a brief introduction and discussion of Arabic morphology, he presents his dictionary alphabetically within categories, beginning with trilateral roots with a doubled consonant (X-Y-Y), then quadrilateral roots with doubled consonants (X-Y-X-Y), and trilateral roots containing two vowels, before proceeding to ‘normal’ trilateral roots. In this section, each word is not listed under its respective trilateral root. Rather, each trilateral is listed alphabetically according to whichever of the three letters is first in the alphabet, then by the second, and finally the third. Thus, words with roots from the same three consonants but in varying orders, such as C-B-A, B-C-A, A-C-B, etc., are all listed under A-B-C. Each subsequent subsection in the alphabetical listing begins with the next series of letters in the trilateral system (after A-B-C, comes B-C-D, then C-D-E, then D-E-F, etc.), thereby avoiding repetition of entries in this already voluminous dictionary. Its comprehensive scope, inclusion of information not found elsewhere, as well as the breadth and depth of the author’s knowledge of Arabic language and poetry made Ibn Durayd’s dictionary uniquely valuable in his own time and even more so today.

Multiple Arabic editions of the *Jamharah* of Ibn Durayd have been published,²¹⁶ but there is not yet any English translation available.

IBN JINNĪ'S

*SIRR AL-ṢANĀ'AH WA-ASRĀR AL-BALĀGHAH**("The Secret of Composition and the Secrets of Eloquence")*

Abū al-Faṭḥ 'Uthmān ibn Jinnī (d. 392/1002) was born in Mosul (modern Iraq) to a Greek slave belonging to a man of the Azdī tribe. He was the student of a teacher from Baṣrah (modern Iraq), to whom he remained loyal until his teacher's death four decades later. Ibn Jinnī then took over his teacher's position in Baghdad. He studied the 'pure' Arabic of the Bedouins in the area of Mosul. He is known to have participated at the courts of Sayf al-Dawlah (r. 333-356/945-967) in Aleppo (modern Syria) and even served as court secretary at the courts of 'Aḏūd al-Dawlah (r. 337-372/949-983) in Fars (modern Iran) and his son, Samsam al-Dawlah (r. 377-388/988-998). He was a contemporary of Hilāl al-Ṣābī (see #47) and was a student of the poet al-Mutanabbī (see #54). He was an expert of Arabic grammar and influential in the field of Arabic etymology. He died in 392/1002.²¹⁷

He authored a number of works on grammar,²¹⁸ morphology,²¹⁹ and verse,²²⁰ but among his most important books is his *Sirr al-ṣanā'ah wa-asrār al-balāghah* ("The Secret of Composition and the Secrets of Eloquence"). The author's mastery of philology, phonology, and grammar is evident throughout this work dealing with Arabic consonants and vowels. He begins with a brief introduction in which he cites an unnamed but prominent member of society as urging him to

compose a book that delineates critical aspects of Arabic phonology. This is followed by a discussion of the difference between sounds and letters. He then proceeds to discuss the different ‘flavors’ of the sounds made by consonantal letters and continues with a discussion of long vowels in Arabic. In the next section, Ibn Jinnī distinguishes himself from all his predecessors in his keen observations of how the human oral, nasal, and pharyngeal anatomic structures create and modify the sounds of the Arabic language. Here, he discusses similarities between the creation of sound by the mechanics of human anatomy and the formation of sound waves by the mechanics of various musical instruments, including those made by wind instruments such as the *ney* (reed flute) and by percussion instruments such as the double-stringed *‘oud* (lute). He then proceeds with a section on various technical terms for the varieties of Arabic letters. This is followed by a section on the *hamzah* (glottal stop) and variants in its usage. He then proceeds with sections on the letters *bā’*, then *tā’*, and continues alphabetically to the end of the Arabic alphabet. Within the section on each letter, he discusses the different combinations in which it can be used, variations in pronunciation depending on which ‘flavor’ of consonants or vowels either precede or follow it, and related matters. Each section makes use of quotations of qur’ānic verses or classical poetry as examples, when appropriate.

The work is a testament to Ibn Jinnī’s meticulous attention to detail as well and his keen observational skills. It deals with aspects of Arabic phonology with much greater precision than many of the works of the great grammarians before him. It represents a fundamental cornerstone in the study of Arabic phonology and remains a useful text for linguists even today.

Several Arabic editions of Ibn Jinnī’s *Sirr al-ṣanā‘ah* are available.²²¹ There is not yet a complete English translation of the text.

IBN MANẒŪR'S
LISĀN AL-‘ARAB

(*“The Tongue of the Arabs”*)

Muḥammad ibn Mukarram ibn ‘Alī (d. 711/1311-1312, known as Ibn Manẓūr in the Islamic West and as Ibn Mukarram in the Islamic East) was born in Tūnis (modern Tunisia). He served as judge in Tripoli (modern Lybia) and also as a secretary in official government office. We know little else about his life other than that he had a penchant for summarizing massive multivolume works. He is reported to have compiled five hundred volumes of such summaries. He died in the month of Sha‘bān, 711/1311-1312, in Egypt.²²²

The work for which he is best known is his *Lisān al-‘arab* (“The Tongue of the Arabs”). It is, like his other books, a condensation of earlier works. He based his *Lisān* on five other dictionaries. To his credit, he borrows information without manipulating it. Unfortunately, he does so without citing the source for each excerpted text. He begins with a brief introduction in which he discusses the importance of the Arabic language and discusses numerous works by previous authors.²²³ He cites the praiseworthy qualities of each text as well as the aspects in which he finds the works to be lacking. He mentions several specific characteristics, but the details can be summarized by his comment that he has found the authors of previous dictionaries to be of two types: those whose works excelled in their compilation of materials but not in their organization, and those who

excelled in their organization of materials but not in their compilation. He aims in his dictionary to find what is, in his opinion, a balance between the two. He also borrows the organization of one of his five source dictionaries and arranges word roots alphabetically by the third of trilateral radicals, which may seem odd until one considers its usefulness in finding rhyming word endings. Modern editions, such as the 1988 Beirut edition cited below, take the liberty of rearranging entries into the modern alphabetical standard. This provides for ease of use by modern readers, but deprives the text of its former organizational usefulness in the composition of poetry or rhymed prose. After his introduction, Ibn Manẓūr provides a section discussing the *hurūf al-muqattaʿah* (individual letters that appear cryptically in the beginning of some qurʾānic chapters). He then includes a section on various other aspects of the alphabet, such as number mysticism (numerical values assigned to each letter of the alphabet and their mathematical relationships), and even medicinal uses of letters written in certain configurations for healing properties. While he himself does not necessarily subscribe to every such notion he includes in his text, he attempts (successfully) to compile as comprehensive a collection of information on Arabic language and the Arabic alphabet as possible. He includes qurʾānic references, *ḥadīths*, classical poetry and other literary sources.

Scholars have commented that “no praise can be too high for Ibn Manẓūr’s achievement in producing so exhaustive a work... With the possible exception of Chinese work, it was the most copious dictionary the world had yet seen... [it is] a veritable store-house of Arabic language, science, and arts.”²²⁴ It is one of the best known and one of the most comprehensive dictionaries of the Arabic language and remains an important source for Arabists to this day.

There are numerous Arabic editions of Ibn Manẓūr’s *Lisān al-ʿarab* available,²²⁵ but no English translation yet.

AL-JĀḤIẒ'S
AL-BAYĀN WA-AL-TABYĪN
 ("Eloquence and Exposition")

Abū 'Uthmān 'Amr ibn Baḥr al-Fuqaymī (d. 255/868-9, known as al-Jāḥiẓ, the bulging-eyed, 'pop-eyed') was born in Baṣrah (modern Iraq) to an unknown family of tribal clients, probably of Abyssinian heritage. He appears to have been, at a very early age, insatiable in his thirst for knowledge and unlimited in his desire to satisfy his curiosity. These traits, combined with a uniquely gifted intelligence and a generally precocious and independent character, made for consistent inability to maintain employment and, consequently, similarly consistent disappointment of his family. He spent time mixing with various groups here and there, occasionally with a study group at the mosque, and occasionally at lectures on subjects of his interest, and occasionally at bourgeois salons. He is known to have attended the teaching circles of some of the most eminent local experts of philology, lexicography, poetry, and theology. His intelligence and acute observation made him a self-taught expert of human nature. He lived in Baṣrah, a major port metropolis near the capital Baghdad, at a time when the empire was at its political and geographic peak. All roads led to the capital of the caliphate, and the proliferation of writing and explosion of knowledge there in the 3rd/9th century exposed him to the equivalent of our modern 'information super-highway.' His rhetorical talent attracted the attention of the caliphs in

Baghdad, where he spent extended periods of time, though he never held any official post. Nor is there any evidence that he ever yearned to approach the caliph's court, as did many who were attracted to wealth and power. It does seem that he was able to obtain significant sums of money to dedicate the books he wrote to wealthy or powerful figures, and he may have earned money from private teaching as well. We even have reports that he was appointed by the caliph al-Mutawakkil (r. 232-247/847-861) as private tutor to his children, but when the caliph saw how ugly he was, the caliph paid him just to stay *away* from the palace. He appears to have suffered a stroke in his later years, after which he remained hemiplegic until he died in the year 255/868-9 in his hometown of Baṣrah.²²⁶

He is credited with having written over two hundred books, about thirty of which are extant in their entirety and about fifty others only partially. Only a few examples will be highlighted for our purposes. His *Kitāb al-ḥayawān*²²⁷ ("The Book of Animals") contains statements that can be seen as prototypes of theories fully articulated centuries later, such as Darwin's theory of evolution.²²⁸ His *Kitāb al-bukhālā*²²⁹ ("The Book of Misers") is an excellent example of his clever witticisms, keen observations, and social satire. He has also authored works such as *al-Burṣān wa-al-ʿurjān wa-al-ʿumyān wa-al-ḥulān*²³⁰ ("Lepers, the Lame, Blind, and Cross-eyed"), the titles of which are enough to give one a notion of the author's unique character and interests. Many of his argumentative political and religious works have not survived the centuries, possibly due to more than just historical accident. His *al-Bayān wa-al-tabyīn* ("Eloquence and Exposition") is a compilation of selected quotations of verse, sermons, historical accounts, anecdotes, and the like, that serve to highlight oratory and poetics in the Arabic language. Universally recognized as one of the greatest Arabic prose writers, al-Jāḥiẓ "gave literary prose its most perfect form, as was indeed recognized first by politicians who made use of his talent... and then by Arab critics who were unanimous in asserting his superiority and making his name the very symbol of literary ability."²³¹ Among the vast and varied corpus of this literary master of classical Arabic, his *al-Bayān wa-al-tabyīn*

represents an important compendium of some of the finest writing in Arabic literature and has even been noted to contain “the scattered seeds of much that later became part of literary theory in a more systematic fashion.”²³² Several Arabic editions of al-Jāḥiẓ’s *al-Bayān wa-al-tabyīn* have been published,²³³ but no complete English translation is yet available.

Complete translations are available of his *Kūṭāb al-bukhalā’* (in multiple editions)²³⁴ and his *Risālat al-qiṣṣan* (“Epistle on Singing Girls”).²³⁵ While there is no complete translation of his *Kūṭāb al-ḥayawān*, a scholarly work is available that contains large portions of translated text.²³⁶ Also available is a complete translation of a work attributed to al-Jāḥiẓ but of questionable authenticity.²³⁷ He is such a towering figure in Arabic literature that multiple published volumes have been dedicated entirely to translated selections his works for the English reader.²³⁸ Scholarly studies on the life and works of al-Jāḥiẓ are also available.²³⁹

IBN QUTAYBAH'S
 'UYŪN AL-AKHBĀR

(*"The Finest Selections of [Narrated] Reports"*)

Abū Muḥammad 'Abd Allāh ibn Muslim al-Dīnawarī (d. 276/889, known as Ibn Qutaybah) was born in Kūfah (modern Iraq), to an Arabized Iraqi family originally from Khurāsān (a historical region spread across modern Iran, Afghanistan and Central Asia). He was a younger contemporary of al-Jāhīz (see previous, #40). Little is known of Ibn Qutaybah's early life, but we know that he studied under some of the greatest Iraqi masters of theology, *ḥadīths*, and philology at the peak of the caliphate's 'golden age' in Iraq, including a disciple of the famous traditionist Aḥmad ibn Ḥanbal. With the reign of the caliph al-Mutawakkil (r. 232-247/847-861) and the subsequent shift in official government position on the theological debates of the time, Ibn Qutaybah's already established literary perspectives came to the attention of the new administration. He was given an administrative appointment by a government minister and appointed judge of Dīnawar (near Kermānshāh, modern Iran) and inspector of the *maẓālim* (grievance) courts in Baṣrah (modern Iraq) until it was sacked during the Zanjī rebellion (257/871, see also Ibn Durayd, #37). He then moved to Baghdad, where he taught until his death in the year 276/889.²⁴⁰

He is famous for a number of works, many of which have survived and some of which have also been published. These include works on the Qur'ān,²⁴¹ on *ḥadīths*,²⁴² on religious leadership and

politics,²⁴³ and on the excellence of the Arabs and their sciences.²⁴⁴ Among the more well-known of his works are his *al-Shiʿr wa-al-shuʿarā*²⁴⁵ (“Poetry and Poets”), his *Maʿānī* (Meanings) on poetic motifs,²⁴⁶ and his *Adab al-kātib*²⁴⁷ (“The Literary Writing of the Secretary”), which is a philological manual for government secretaries. His *ʿUyūn al-akhbār* (“The Finest Selections of [Narrated] Reports”) is a large literary compendium on a variety of subjects. It includes selections of poetry, prose narratives, *ḥadīths*, and other reports. It is divided thematically into ten sections. The first is on rulers (leadership, responsibilities, manners of behavior and speech in the ruler’s presence, etc.), followed by sections on war (behaviors during battle, tactics, garrison towns, etc.), natures and behaviors (envy, deceit, ignorance, stinginess, etc.), as well as sections on knowledge, piety, brotherhood, foods, and ending with a section on women (differences in the behaviors of women, marriage, dowries, beauty, etc.). The author’s traditionist views are evident in his presentation of the subject matter, but the subjects themselves are not religious or political. Rather, the work has a literary bent and serves as a voluminous compilation of literary accounts. As the title suggests, the selections are the choicest gems of exemplary text selected from a vast corpus available to the author. While al-Jāḥiẓ (see previous, #40) remains the prime example of the master of *adab* as a genre, this work by his younger contemporary exemplifies Ibn Qutaybah’s more systematic approach to the presentation of the genre’s literary material.

Numerous editions of Ibn Qutaybah’s *ʿUyūn al-akhbār* have been published in Arabic,²⁴⁸ but there is not yet a complete English translation. Much of the text has been translated in serial by Josef Horowitz,²⁴⁹ whose untimely passing halted the completion of the project. The section on natural history has also been translated as an independent project.²⁵⁰ Complete and selected English translations are available of others among his works, including a complete translation of the *Faḍl al-ʿarab*²⁵¹ (“Excellence of the Arabs”), the introductory portion of his *al-Shiʿr wa-al-shuʿarā*²⁵² (“Poetry and Poets”), and selections of his *Adab al-kātib*²⁵³ (“The Literary Writing of the Secretary”) and his *Taʾwīl mukhtalif al-ḥadīth*²⁵⁴ (“Explanation of the Contradictions in *Ḥadīth*”).

AL-BAYHAQĪ'S
AL-MAḤĀSIN WA-AL-MASĀWĪ
 (“*Excellencies and Equivalents*”)

Aside from the fact that his name was Ibrāhīm ibn Muḥammad al-Bayhaqī,²⁵⁵ that he was a friend of Ibn al-Mu‘tazz (see #53), and that he authored *al-Maḥāsin wa-al-masāwī* (“Excellencies and Equivalents”) sometime after the death of Ibn al-Mu‘tazz, we know nothing of his biography. We know that he was alive between the years 295-320, but even his death date is uncertain.²⁵⁶

His *al-Maḥāsin wa-al-masāwī* (“Excellencies and Equivalents”) is a part of a genre that focuses on opposites, contradictions, and antitheticals (dogs and cats, boys and girls, etc.). Earlier works in the same genre, such as the *al-Maḥāsin wa-al-aḍḍād*²⁵⁷ (Merits and Opposites) that is attributed to al-Jāḥiẓ (see #40) but is of questionable authenticity, lists topics such as books, correspondence, thankfulness, truth, keeping secrets, women, marriage, etc., citing the merits of each followed by a section entitled “its opposite” in which the author cites the negative aspects of that same subject. These earlier works were expanded upon by al-Bayhaqī to include more religious, moral, and social topics. Within each category, al-Bayhaqī cites verses of poetry, anecdotes, or historical accounts confirming the good qualities of that particular subject, followed by other examples confirming the flaws of that subject. He begins the book with sections on the good aspects of books, the Prophet Muḥammad, the first four caliphs, some other

figures from early Islam, as well as some religious matters. With these sections on religious matters, however, he does not list flaws. Instead, he lists their merits, and the flaws of their opposites. For example, he lists the merits of Muḥammad, and the faults of those such as Musaylimah, who (falsely) claimed prophecy. Similarly, he lists the merits of the fourth caliph, Alī ibn Abī Ṭālib, and the flaws of those who fought against him during the civil wars. After such religiously-tempered exceptions, the author proceeds with sections in which he discusses the good and bad aspects of such subjects as giving thanks, dreams, brotherhood, poverty, etc. As with other works in this genre, al-Bayhaqī's compiles literary examples from both verse and prose literature describing the merits or the faults of more than a hundred such subjects. Unlike many of its counterparts, however, this book represents one of the earliest works of the genre, and arguably the most influential among them.

Several Arabic editions of al-Bayhaqī's *al-Maḥāsīn wa-al-masāwī* have been published,²⁵⁸ but it has not yet been translated into English.

IBN ‘ABD RABBIH’S
AL-‘IQD AL-FARĪD

(“*The Unique Necklace*”)

Aḥmad ibn Muḥammad (d. 328/940, known as Ibn ‘Abd Rabbih) was a writer and poet born in Cordova (modern Spain) to a family of tribal clients of the Umayyad prince Hishām ibn ‘Abd al-Raḥmān (r. 171-180/788-796). Little known of his early life. He received the typical traditional education of the literati of his time, including the study of Qur’ān, *ḥadīths*, jurisprudence, as well as philology, grammar, literature and poetry. We know that he served as an official panegyric court poet for several Andalusian princes. The occupation appears to have been a good fit for his personality, as he seems to have been fond of music, wine, women, and courtly merriment in general. Many of the verses he composed in his youth had erotic elements while those composed in his elder years included some that were more ascetic. Unlike many other Andalusian scholars and literati who typically traveled to other major centers of learning in the Eastern Islamic lands in search of knowledge, Ibn ‘Abd Rabbih seems to have never left Andalusia. He died in 328/940 in his hometown of Cordova.²⁵⁹

Aside from his poetry collection,²⁶⁰ the work for which he is best known is *al-‘Iqd al-farīd* (“The Unique Necklace”). This monumental work is structured in the manner of a bejeweled necklace, divided into twenty-five ‘books,’ each named for a type of gem (Pearl, Ruby,

Emerald, Mother-of-Pearl, etc.). The thirteenth is the Book of the Middle Jewel and the second dozen mirror the first in reverse order. Each book comprises literature on a specific theme. The first dozen begins with literature on leadership, then on war, generous people, delegations, addressing royalty, learning and literature, proverbs, sermons, elegies, genealogy of the Arabs, speech of the Bedouin, and responses. The thirteenth book, the Book of the Middle Jewel, is on oratory. Then the second dozen are on epistolary and secretarial matters, caliphs, other rulers, battles, poetry, prosody, song, women, socially disreputable people, characteristics of humans and animals, food and drink, ending with a book on witticisms and jokes. Within each section, Ibn ‘Abd Rabbih compiles topical poetry and prose from a wide variety of sources, including much of his own poetry. The Bible, Qur’ān, and *ḥadīths*, are included among his literary sources, as well as the works of several of the figures in our list, including al-Jāḥiẓ (see #40) and Ibn Qutaybah (see #41), upon whom he seems to have relied most heavily.²⁶¹ The *‘Iqd* is based almost entirely on Arabic sources from the central Islamic lands, and seems to have been intended to acculturate Andalusians to those sources. As a whole, this massive literary compilation serves as a “sort of encyclopedia of the knowledge which is useful to a well-informed man and as a more or less successful attempt at orderly classification of the notions which constitute general culture.”²⁶²

Multiple Arabic editions of the *‘Iqd al-farīd* are available.²⁶³ A complete translation project is underway, three volumes of which have already been published.²⁶⁴ Selections of Ibn ‘Abd Rabbih’s poetry are also available in English translation²⁶⁵ and selections from the *‘Iqd* on music have been translated in an independent study on the subject.²⁶⁶ Also available is a study on the role of the Qur’ān in the *‘Iqd*.²⁶⁷

ABŪ AL-FARAJ AL-ISFĀHĀNĪ'S
KITĀB AL-AGHĀNĪ

(*"The Book of Songs"*)

‘Alī ibn al-Ḥusayn ibn Muḥammad al-Qurashī (d. 356/967, known as Abū al-Faraj) was born in Iṣfahān (modern Iran) to a Shī‘ī Arab family descended from the Umayyad branch of the Quraysh tribe. He moved to Baghdad at an early age to study and, attracted by all that the city had to offer during its zenith as the capital of the Abbasid empire, settled there for most of his life. He began with the study of *ḥadīths*, but the youth quickly became attracted to the poetry, song, and the literary pleasures of the capital. Throughout his career, he studied and compiled all manner of literary reports from a wide variety of genres. He enjoyed good relations with courts of both the Buwayhīs in Baghdad and later, the Ḥamdānīs in Aleppo (modern Syria). It was to the Ḥamdānī prince Sayf al-Dawlah (r. 333-356/945-967) that his most famous book, the *Kitāb al-aghānī*, was dedicated. He died in Baghdad in 356/967.²⁶⁸

Among his works are the *Maqātil al-ṭālibīyīn*²⁶⁹ ("The Murders of the Descendants of Abū Ṭālib"), *Adab al-ghurabā*²⁷⁰ ("The Literature of Strangers"), as well as other books that have been lost to history, including a work on genealogy and a book on the *Ayyām al-‘arab* ("Days of the Arabs"). The book for which his name is widely known is his *Kitāb al-aghānī* ("The Book of Songs"). This voluminous work was a massive undertaking consuming fifty years of the author's life

and consisted of over 10,000 written pages. It is a collection of songs by famous musicians as well as by other famous personalities, such as caliphs and their descendants. But the *Aghānī* is much more than a collection of song lyrics. The author adds a wide variety of related biographical and other information on the people involved, including authors, poets, melodic composers, and more. The work includes a selection of one hundred songs selected for the caliph, information on the musical composers of the royal court, and the author's personal selections. It also includes detailed instructions for performance of the songs. It should be noted for modern readers that, unlike our general conception of poetry today, poems in traditional Arabic culture were frequently sung rather than recited plainly. As such, the *Kitāb al-aghānī* also includes valuable information about the poets who composed the songs. The author provides a wealth of additional information such as "details about the ancient Arab tribes, their *ʿayyām* [times], their social life, the court life of the Umayyads, society at the time of the 'Abbāsī caliphs, especially of Hārūn al-Rashīd, and the milieu of musicians and singers. In one word, in the *Aghānī* we pass in review the whole of Arabic civilization from the *djahiliyyah* down to the end of the 3rd/9th century."²⁷¹

Numerous editions of Abū al-Faraj al-Isfāhānī's *Kitāb al-aghānī* have been published in Arabic,²⁷² but no complete English translation is yet available. There are, however, several excellent English-language scholarly works on the *Kitāb al-aghānī* itself.²⁷³ There is also an English translation of his *Adab al-ghurabā'*.²⁷⁴

AL-TANŪKHĪ'S
AL-FARAJ BA'D AL-SHIDDAH
 (“*Salvation After Difficulty*”)

Abū ‘Alī al-Muḥassin ibn ‘Alī al-Tanūkhī (d. 384/994) was born into a family of *ḥadīth* transmitters in Baṣrah (modern Iraq). He began his study of literature at a young age and among his teachers was the famed Abū al-Faraj al-Isfāhānī (see previous, #44). He was appointed to several government positions, including supervisor of measures and weights of the mint at multiple locations in Iraq, judge in Khūzistān (modern Iran), and secretary at various government departments in the capital, Baghdad. As his career advanced, he approached ever closer to the inner circle of the reins of power. At one point he even became a companion of the Buwayhī prince ‘Aḍud al-Dawlah (r. 367-372/978-983 in Iraq), until shifting political winds led to al-Tanūkhī's house arrest and his subsequent flight from the capital. He eventually returned, but lived a life of isolation and difficulty until his death in 384/994.²⁷⁵

He wrote several books, all of which were compilations of anecdotes narrated to him orally or incidents that he witnessed himself. The *Mustajād min fa‘alāt al-aḡwād*²⁷⁶ (“That Which Is Considered Excellent from Among the Deeds of the Magnanimous”), which lists anecdotes of generosity, is attributed to al-Tanūkhī, but that attribution may be questionable. His *Ĵami‘ al-tawārīkh*²⁷⁷ (“Compilation of Histories”) is a collection of anecdotes about the intrigues of high

society, but less than half of the original text has survived. Perhaps the most famous of his works is his *al-Faraj ba'd al-shiddah* ("Salvation After Difficulty"). In it, anecdotes are reported that relate noble deeds and accounts of people falling into difficult situations and finally being saved through seemingly impossible circumstances. The stories often involve some spiritual aspect, such as the involvement of verses from the Qur'ān or visions of the Prophet, prompting the persons involved to take some unusual actions they would not have otherwise taken. The book contains fourteen sections, beginning with one on Qur'ānic verses related to salvation, followed by a second on related *ḥadīths*, and a third on being rescued from tribulations as a result of prayer or supplication. The subsequent sections cover topics such as rescue from the wrath of a ruler, from imprisonment or capture in war, from illness, from wild beasts, from thieves, etc. While he does occasionally cite poetry throughout the work, the final section is dedicated entirely to relevant poetic citations. The book does contain some historical elements, but it is not a work of history, *per se*. Its entertaining anecdotes made it popular for generations after its author's lifetime and it was frequently referenced in other sources (see, for example, the *Maqāmāt* of al-Ḥarīrī, #49). It even seems to contain some elements that may have served as the origins of stories in the Arabian Nights.²⁷⁸ The author's works are also important for modern scholarship in that his documentation of his first-hand experiences while employed as a government official give us a unique glimpse into the inner workings of the bureaucracy of the 'Abbāsī caliphate of his day.

Multiple Arabic editions of al-Tanūkhī's *al-Faraj ba'd al-shiddah* have been published.²⁷⁹ Some excerpts of the *Faraj* have been translated into English,²⁸⁰ but no complete English edition is yet available. There is also an English translation of the first portion of his *Ḥāmi' al-tawārīkh*.²⁸¹

AL-THA‘ĀLIBĪ’S
YATĪMAT AL-DAHR FĪ MAḤĀSIN AHL AL-‘AŞR

*(“The Uniquely Destined [Book]
 on the Excellent works of Contemporaries”)*

‘Abd al-Malik ibn Muḥammad ibn Ismā‘īl al-Tha‘ālibī (d. 427/1036) was born in Nishāpūr (modern Iran) to a family of modest means. They may have been a family of fox furriers, as his *nisbah*, Tha‘ālibī, could indicate. Though we have few details of his early life, we know that, as an adult, he was on friendly terms with a prominent local family and with the provincial governor. He lived at a time of regional literary, scientific, and cultural productivity in the Eastern Islamic lands that began to approach the intellectual and cultural influence of the capital, Baghdad. Although he never traveled to the central Islamic lands, he did travel regionally throughout Eastern Islamdom and met with the great scholars and litterateurs of his generation at such intellectual centers as Bukhārā (modern Uzbekistan), Jurjān (modern Iran), Ghaznah, and Herāt (both in modern Afghanistan). He was also invited to the royal court of the Khwārazmshāh in Jurjānīyah (modern Konye-Urgench in Turkmenistan, just south of the border with Uzbekistan), where he was among other intellectual luminaries such as Ibn Sīnā (See #70) and al-Bīrūnī (see #99). After his travels he returned to his native Nishāpūr, where he died in 427/1036 at the age of seventy-nine.²⁸²

He is known for a number of influential works, including his *fiqh al-lughah wa-sirr al-‘arabīyah*²⁸³ (“The Science of Language and the Secret of Arabic”), a lexicographical and grammatical work; *Sihr al-balāghah*²⁸⁴ (“The Magic of Eloquence”), a dictionary of excerpts of stylized rhymed prose; *Thimār al-qulūb*²⁸⁵ (“The Fruits of the Hearts”), a dictionary of phrases and clichés; and *Latā’if al-ma‘ārif*²⁸⁶ (“Entertaining Information”), among others. Nearly all of his works are compilations of poetry and prose carefully woven into a collection deliberately organized serve a specific stated purpose. His most famous work is the *Yatīmat al-dahr fī maḥāsīn ahl al-‘aṣr* (“The Uniquely Destined [Book] on the Excellent works of Contemporaries”), a comprehensive anthology of contemporaneous Arabic literature. Unlike all previous authors of such compilations, al-Tha‘ālibī focuses only on contemporaneous authors and poets, excluding all earlier or classical works. In his compilation he evidences “a methodological consciousness expressed in... selections and arrangement, and a sophisticated system of internal references and cross-references to other works.”²⁸⁷ Organization is neither thematic nor chronological, nor are poetry and prose separated. Instead, the work maintains a geographic arrangement rather than alphabetically by author or title. Included are over four hundred authors and poets, with dozens of pages dedicated to luminaries such as al-Mutanabbi (see #54) and al-Ḥamdānī (see #55), but fewer devoted to lesser-known figures. He covers the entire Islamic world of his time, from Andalusian Spain, across North Africa and Egypt, through the Fertile Crescent, and into the Eastern lands and Transoxiana. His profound grasp of literature combined with his mastery of elegance and eloquence in writing earned him the epithets of ‘The Jāḥiẓ of Nīshāpūr,’ ‘The Second Jāḥiẓ,’ and ‘The Last Jāḥiẓ’ (see al-Jāḥiẓ, #40).²⁸⁸ He also composed a sequel, *Tatimmat al-yatīmah* (The Completion of the *Yatīmah*), which supplemented the original with additional sources that he came across later in his life. In all his works, al-Tha‘ālibī’s “primary objective was to celebrate the aesthetic possibilities of the Arabic language and its literature and to retail, rearrange, and preserve the legacy of that literature for his contemporaries and later

generations.”²⁸⁹ His *Yatīmah* is a testament to that objective and its influence on all future works of literary anthology in Arabic cannot be overstated.

Several Arabic editions of the *Yatīmah* have been published.²⁹⁰ Though there are not yet any English translations, an excellent study on al-Tha‘ālibī and his *Yatīmah* is available in English.²⁹¹ An index to the biographical data of the *Yatīmah* is also available.²⁹² His *Latā’if al-ma‘ārif* has been translated into English²⁹³ and can provide the English reader with a glimpse of both the author’s style and his wit.

AL-ṢĀBĪ'S
RUSŪM DĀR AL-KHILĀFAH

(*“Official Regulations of the Palace of the Caliph”*)

Hilāl ibn Muḥassin ibn Ibrāhīm al-Ṣābī (d. 448/1056) was born in Baghdad to a family of Sabean²⁹⁴ (hence his *nisbah*, “al-Ṣābī”) scholars originally from Ḥarrān (slightly south of Sanliurfa, in modern Turkey). The family moved to Baghdad, where his grandfather served as director of the chancery. The grandfather al-Ṣābī, though Sabean, memorized the Qur’ān and quoted it elegantly in official courtly writings and professional correspondences.²⁹⁵ During the reign of Samsam al-Dawlah in Baghdad (r. 372-376/983-987, see also Ibn Jinnī, #38 and al-Mutanabbī, #54) the younger al-Ṣābī began to assist his grandfather in his duties as director of the chancery and later became director himself. At approximately forty-four years of age, he became the first of his Sabean family to convert to Islam. He and his family were so well-respected that, even when shifting political tides toppled his patron, he was able to live the rest of his life on a pension that the new administration allowed him to keep. He died in 448/1056.²⁹⁶

He authored a number of important works, many of which have been lost to history. Among those that have not perished entirely are his *Kitāb al-wuzarā*²⁹⁷ (“The Book of Ministers”), of which only a portion has survived. His *al-Muntaẓa‘ min kitāb al-tājī*²⁹⁸ (“Excerpts

from the Book of the Crown”) is a collection of excerpts of his grandfather’s work. A single complete manuscript has survived and it has been edited and published. Unfortunately, these excerpts are all that remain of his grandfather’s clearly remarkable work, which would have been worthy of inclusion in this list. And only one section of his *Tārīkh* (“History”), which was a continuation of his father-in-law’s *Tārīkh*, has survived. His *Ghurar al-balāghah*²⁹⁹ (“The Finest Highlights of Eloquence”) is also available in a published edition.

His *Rusūm dār al-khilāfah* (“Official Regulations of the Palace of the Caliph”), which details official court protocols and etiquette, has survived in its entirety. After an introductory section in which he praises the caliph and the ‘Abbāsī dynasty, he explains that by association with his grandfather, he has “acquired a great deal of his knowledge of the art of court service and of the nature of established court ceremonies,”³⁰⁰ which he wishes to publish before the knowledge is lost forever. He begins with a section on the extensive palace grounds and all of the symbols of power at the caliphal court. Included is a list of expenses for the needs of the palace. He then proceeds to discuss the protocols for ministers, secretaries, and others in terms of their hygiene, dress, behavior, walk, and speech in the presence of the caliph. Another section deals with the role of the chamberlain. Subsequent sections detail caliphal robes, the types and significance of various banners and robes, audiences at court, and the appropriate gifts to regional princes upon assignment of positions or titles. Additional sections detail the protocols of official correspondence, including not only the formulaic language to be used in the introductions and conclusions of caliphal letters and their content, but also types and sizes of paper that are appropriate, as well as envelopes and the types and colors of tassels with which they are tied and seals with which they are sealed. The author also includes sections on the assignment of official titles, speeches from pulpits, speeches at weddings, and a section on palace drums announcing prayer times. He concludes with additional formulaic praise for the caliph, mirroring the book’s beginning. The author intersperses rele-

vant anecdotal examples throughout, many related by his grandfather from his experiences at court. The work is an exemplary guide to courtly etiquette written in sophisticated literary Arabic by an individual eminently qualified to compose just such a piece. It not only represents courtly literary style, but also includes a wealth of information on the protocols of the caliphal courts of the ‘Abbāsī dynasty.

The *Rusūm dār al-khilāfah* of al-Ṣābī has been published in an Arabic edition³⁰¹ and has even been translated into English in its entirety.³⁰² The surviving fragment of his *Tārīkh* is also available in English.³⁰³

AL-RĀGHIB AL-IṢFAHĀNĪ'S
MUḤĀḌARAT AL-UDABĀ'

(*"The Discussions of the Literati"*)

Known as al-Rāghib al-Iṣfahānī, al-Ḥusayn ibn Muḥammad ibn al-Mufaḍḍal was born in Iṣfahān (modern Iran). Little is known of his life in spite of the popularity of his writing, which included both religious and literary works. He was anti-Mu'tazilī and anti-Shī'ī in his writings, but still used rational arguments as they did, when writing against them and in support of Sunnī orthodox religious positions. His exegesis is quoted by Fakhr al-Dīn al-Rāzī (see #7) and his major work on ethics was a direct influence on al-Ghazālī (see #23). There do not appear to be any indications that he left his native Iṣfahān to visit any of the other great intellectual centers of his time. Although his death date is uncertain, numerous references to contemporaries about whom we have more definitive information indicate that he most likely died early in the 5th/11th century.³⁰⁴

He authored a number of religious and literary works, among them a thesaurus of eloquence entitled *Majma' al-balāghah* ("The Assembly of Eloquence"), as well as works on ethics³⁰⁵ and on qur'ānic vocabulary.³⁰⁶ Altogether, they are a testament to his keen understanding of the subtleties of the Arabic language. Perhaps his most famous work is the *Muḥāḍarāt al-udabā' wa-muḥāwarāt al-shu'arā' wa-al-bulaghā'* ("The Discussions of the Literati and the Dialogues of the Poets and Orators"). It is an encyclopedic compendium of Arabic

literature. It consists, like several of its predecessors, of twenty-five sections, following previous authors' organizations of twelve chapters with two parts each. He begins with a brief introduction, then proceeds with chapters on intelligence and stupidity, on leadership, fairness and injustice, on helpfulness and good behaviors as well as on betrayal and insults. He continues with chapters on parenthood and childhood, on praise and censure, on having lofty ideals, goals and hopes, on work, revenue, wealth and poverty, on requests, giving, and stinginess, on foods, on drink and drinking, and on brotherhood. He includes relevant poetry and prose selections from across the centuries and, in particular, quotes frequently the poetry of al-Mutanabbī (see #54). This literary compendium compiled by a master philologist and litterateur stands out as exemplary within the genre, as does the author's influence on great literary figures of later centuries.

Multiple Arabic editions of the *Muḥāḍarāt al-udabā'* have been published,³⁰⁷ but there is not yet any English translation. An English translation of his work on ethics is available.³⁰⁸

AL-ḤARĪRĪ'S
MAQĀMĀT

(“*Assemblies*”)

Known as al-Ḥarīrī (or sometimes, Ibn al-Ḥarīrī), al-Qāsim ibn ‘Alī ibn Muḥammad (d. 516/1122) was born in Baṣrah (modern Iraq) to a family of land-owners in nearby Mashān. His early education was in Baṣrah, and as an adult, he occupied an official government post as the city’s intelligence chief. It appears that while in this position his work “left him with sufficient leisure to take part in the serious conversation of the bored bourgeois society of the decadent Baṣrah of his day, to apply himself to poetry and to write books.”³⁰⁹ He was, by virtue of his official position, clearly in regular contact with high-ranking officials of the central government, though it is unclear what role that may have played in his writings and subsequent literary success. He died in 516/1122.³¹⁰

He is the author of several works, including the *Durrat al-ghawwās* (“Pearl of the Pearl-divers”),³¹¹ a work that notes the improper usage of common Arabic expressions, but his most famous work is the *Maqāmāt* (Sessions or Assemblies). It is the most famous in a genre of works in which a narrator relates stories of a trickster figure who travels from city to city and awes audiences (assemblies) of gathered onlookers with his honey-sweet tongue. This trickster quotes classical poetry and, with rhetorical flourishes, the wandering rogue dupes his audience along with the narrator and escapes to his next hustle. The

embarrassed and abused narrator, nevertheless, keeps chasing after the trickster, narrating for the reader each new episode in each new city or town. In the final chapter, the rogue mends his evil ways and settles down to a pious Šūfī life. The *Maqāmāt* of al-Ḥarīrī achieved widespread fame within the author's lifetime and enjoyed continued popularity for centuries afterwards. It was famed not only for its entertainment value, but also for the author's "unequalled mastery of the Arabic language and a perfect command of its inexhaustible vocabulary; verbal exuberance leads to acrobatics which the followers of al-Ḥarīrī, who regarded him as the most perfect representative of the genre, delighted in."³¹² Though the work is itself an imitation of the earlier *Maqāmāt* of al-Hamadhānī (d. 398/1008), the popularity of al-Ḥarīrī's *Maqāmāt* eclipsed that of the original and itself spawned numerous imitations, not only in Arabic, but also in other languages common throughout Islamic civilization such as Hebrew,³¹³ Syriac, and Persian. Among al-Ḥarīrī's students were Andalusians who, upon their return home, established the book's fame there as well, where it became standard reading for the educated classes. Selections were even translated into Latin by 1656.

Numerous Arabic editions of al-Ḥarīrī's *Maqāmāt* have been published.³¹⁴ This wildly popular and singularly influential work has retained its popularity across centuries and across cultures, with a number of English translations available,³¹⁵ as well as a beautiful edition of an illustrated medieval manuscript.³¹⁶ There is also a scholarly work discussing the recently discovered illustrated manuscript of the *Maqāmāt*.³¹⁷

AL-ZAMAKHSHARĪ'S

RABĪ' AL-ABRĀR

(*"The Spring [Season] of the Righteous"*)

The biography of Maḥmūd ibn 'Umar al-Zamakhsharī (d. 538/1144, known as *ḥār Allāh*, the neighbor of God), has already been mentioned along with his exegesis in part I (see #5). Among the numerous other works he composed was his *Rabī' al-abrār wa-nuṣūṣ al-akhbār* ("The Spring [Season] of the Righteous and Texts of Reports"). It is a collection of extracts from a wide variety of literary sources including poetry, prose, *hadiths*, exegetical and theological works, as well as other literary sources. The source of each extract is cited and the extracts themselves are divided thematically into ninety-two sections, covering nearly every aspect of human existence. It is clear that al-Zamakhsharī intended this work to accompany his qur'ānic commentary.³¹⁸ Some section titles, despite the fact that they cover essentially earthly topics, noticeably end with references to a related aspect of the hereafter. For example, the section on gardens, fruits, herbs, etc., includes references to the gardens of heaven and the section on fire, lamps and candles, includes references to the fires of hell.

The book begins with a section on timing and the remembrance of this world and the hereafter. It then proceeds to sections on various aspects of the natural world of God's creation. There are sections on clouds, rain, snow, thunder, and lightning; the wind, breezes, heat,

cold, and shade; fire, lamps, candles, and the fires of hell; Earth, mountains, stones, pebbles, gemstones, and the earthquakes [of the day of judgement]; water, oceans, valleys and rivers, springs and wells; trees, plants, fruits, [aromatic] herbs, gardens, and reminders of the rewards of [the gardens of] heaven. The work then delves into sections dealing with (non-botanical) living beings from God's creation. These include sections on angels, humans, *jinn*s, and devils. The focus then shifts to humankind and human society, with sections on cities and buildings, human behaviors (both good and bad), love, education and upbringing, luck, salvation, patience, and other aspects of humanity such as youth, bravery, religion, sleep, trade, leadership, and the like. It ends with sections on animals such as horses, camels, fish and other sea creatures and concludes with insects. It is a veritable compendium of Arabic literary references on nearly every aspect of life as we know it.

Several Arabic editions have been published,³¹⁹ but no English translation is yet available.

ḌĪYĀ' AL-DĪN IBN AL-'ATHĪR'S

AL-MATHAL AL-SĀ'IR

(*"The Contemporary Exemplar"*)

ḌĪYĀ' al-Dīn ibn Muḥammad ibn 'Abd-al-Karīm ibn al-Athīr (d. 637/1239) was born in Jazīrat Ibn 'Umar, (modern Cizre, on the Turkish side of the confluence of today's borders of Turkey, Syria, and Iraq) to a wealthy land-owning family whose patriarch was an official at the court of the Zangī dynasty at Mosul (modern Iraq). His brother, Majd al-Dīn, was a well-known scholar of philology and religious studies. Another brother, 'Izz al-Dīn (see #66), was a historian. ḌĪYĀ' al-Dīn was the most politically active of the three brothers. He rose through the government ranks, became a *wazīr* (minister) and even joined the inner circle of Ṣalāḥ al-Dīn al-Ayyūbī (Latin 'Saladin,' r. 569-589 / 1174-1193). Later, he became the *wazīr* to Ṣalāḥ al-Dīn's son, al-Afḍal, in Damascus (modern Syria). When the political winds shifted and al-Afḍal lost control of Damascus, ḌĪYĀ' al-Dīn was forced to flee the city. He only just barely escaped, but managed to find safety at the court of Arslan Shāh in Mosul. After rejoining al-Afḍal and traveling around Egypt, Syria, and the foothills of the Anatolian highlands, he ended up once again in Mosul and served as court secretary to the grandson of Arslan Shāh for the remainder of his life. He died in 637/1239, while serving on a delegation to Baghdad.³²⁰

All of his writings evidence a mastery of literary criticism. Many have survived and are available in published editions. Among these are his *al-ġāmi' al-kabīr* ("The Grand Compendium") and his *Rasā'il* ("Letters"), which deal with "all the topics on which an educated man had to be able to express himself in a literary fashion."³²¹ But his best known work is his *al-Mathal al-sā'ir fī adab al-kātib wa-al-shā'ir* ("The Contemporary Exemplar in the Discipline of the Writer and Poet"). It begins with brief introductory sections on the importance of the art of eloquence and discussion of earlier works on the subject, before delving into detailed sections on matters of grammar, linguistics, and stylistics. He cites Qur'ānic verses and *ḥadīths* in abundance within in each section. Interspersed in relevant sections are examples of his own compositions and his constructive criticisms of weak attempts at eloquence in writing. For example, in one section, he refers to writing a letter of condolence on the occasion of the simultaneous passing of the wife of a king and that of their son. He reports the difficulty faced by one scribe on such an occasion, and advises, "condolences are of different types, those of women differ from those of men, and it is among the most difficult of things in writing and poetry, and the condolences of men also differ, as one does not pay respects to one who has passed away in bed in the same way as one would someone who has been killed, nor would one pay respects to the one who was killed in the same way as one would someone who has drowned."³²² He continues with sections on such topics as metaphors, ambiguity, repetition, redundancy, pithiness, and implication. He includes some critical sections in which he addresses the "errors of some scholars of writing" and "some of the verbal acrobatics of al-Ḥarīrī" (see #49). Toward the end of the work are numerous sections dealing with 'borrowing' of ideas or poetic techniques and he compares citations between numerous pairs of poets. He ends the work with a refutation of al-Ṣābī's (the Grandfather, Abū Ishāq Ibrāhīm al-Ṣābī, see #47) assertion of the precedence of poetry over prose, citing the prominence of prose writing. As a whole, the work is a masterpiece of classical Arabic literary criticism in which the author does not shy away from critical remarks on the stylistics of earlier masters. It remains,

to this day, indispensable to the understanding of the highest levels of sophistication in classical Arabic writing.

There are numerous published editions of *al-Mathal al-sā'ir* in Arabic.³²³ While we do not yet have a complete English translation, translated selections are available.³²⁴

THE *DĪWĀN* OF ABŪ NŪWĀS(*“Collected Poems”*)

The name of the poet known by the moniker Abū Nuwās (the one with dangling side-locks of hair) is al-Ḥasan ibn Ḥānī al-Ḥakamī (d. ca. 199/814). He was born in Ahwāz (modern Iran) to a Persian mother and a father who was a soldier and a tribal client of a South Arabian tribe. He came to Baṣrah (modern Iraq) at an early age to study with masters of poetry. His first teacher was alleged to have had more than just a master-disciple relationship with him. After his first teacher's passing, he found another teacher who was not only a poet, but also a narrator of both Qur'ān and *ḥadīths*. He also followed the common practice of the linguists and grammarians of the early period and spent time absorbing 'pure' Arabic language from desert Bedouin tribesmen. He then moved to the capital, Baghdad, in the hopes of patronage at the caliphal court by way of his panygeric poetry, but did not succeed as he had hoped. He did find some favor with members of the powerful Barmakī family in the caliphal administration. However, with the changing political winds that brought an end to the family's power in Baghdad, he had to flee for his life. He stayed in Egypt throughout the subsequent turmoil in Baghdad. He eventually returned and rose to prominence at court as one of the favorite companions of the caliph al-Amīn (r. 193-198/809-813), which marked the peak of his poetic success. There are widely varied reports regarding his death, from dying in prison

for his blasphemous poetry, to dying in the house of a tavern mistress, to dying in the house of a scholarly family. Although the exact date is unknown, we have a better idea of the timing of his death than the manner. Historical evidence indicates that he is most likely to have died sometime within a year of 199/814.³²⁵

His *Dīwān* (“Collected Poems”) is rife with unabashed hedonism. He boasts openly of his sins, delighting in wine and song and the love of boys. In spite of, or perhaps because of, his traditional religious education, he ridicules Islam and its institutions, though not because of anything particular to Islam. He would have ridiculed with equal vigor any other religion had he been a poet in any other society. His qualms were with any notions that interfered with his hedonistic, homoerotic and pederastic pleasures, which led to his imprisonment on at least one occasion. He did compose some ascetic poems toward the end of his life. These are theorized by some to have been indicative of repentance, while others consider them to be merely passing emotions or the product of the poet’s submission to the puritanical caliphal administration that replaced the former administration of his libertine patron. But his innovative poetry was revolutionary not only in content. His style was also unconfined. He ridiculed classical (early Islamic and pre-Islamic) forms of poetry and he is the preeminent exemplar of what early critics of Arabic literature called the ‘modern school’ of poetry. Abū Nuwās was “more interested in the witty formulation of his ideas than in the content of the idea itself.”³²⁶ Also, Persian language and references to heroic figures of Persian history and legend appear in his poetry, not necessarily as a reflection of his ancestry, but more likely as a reflection of the increasing Persian cultural influence on the high caliphate of the 2nd/8th century. He is also the first Arabic poet to turn the formerly peripheral hunting poem (including imagery of falconry, hunting dogs, hunters, and game) into a genre unto itself.

Abū Nuwās was such a pivotal figure in the Arabic poetic tradition that his influence remains palpable to this day. He even entered Arabian popular legend: he is mentioned among the stories of the 1001 nights, though in a fictitious, ahistorical manner. Abu

Nuwās himself never compiled his poems. They were compiled by a friend, who was also a student of Ibn al-Mu‘tazz (see #53, next). Ironically, while his poems were copied and distributed widely in the medieval era, our ‘modern’ era has witnessed the censoring of his *Dīwān* in print and book-burnings of his homoerotic poems.

Many Arabic editions of his *Dīwān* have been published,³²⁷ as well as an English translation.³²⁸ Also available are English language works about him and his poetry, including translations of selections.³²⁹

IBN AL-MU‘TAZZ’S
KITĀB AL-BADĪ‘

(*The Book of the New [Style]*)

‘Abd Allāh ibn al-Mu‘tazz (d. 296/908, known as ‘the caliph for a day’) was born in Samarrā’ to the caliph al-Mu‘tazz (r. 252-255/866-869) and an unnamed mother who was likely a Byzantine *jārīyah* (slave girl). His grandfather, the caliph al-Mutawakkil (r. 232-247/847-861) was killed and his father, the caliph al-Mu‘tazz, was deposed and died in prison. The young prince, no longer politically relevant, was then taken care of by his Byzantine grandmother, who ensured his education. The young boy seemed to have a remarkable gift for poetry that was heartily encouraged by his teachers in poetry and philology. After his grandmother’s passing, he settled near Samarrā’ (modern Iraq) and spent the next fifteen years enjoying the pleasures commonly described by poets in their poems. His poems show “an ability to see and enjoy what is beautiful that developed into an artistry much admired by imitators who, like him, tried to describe details of things that escape the ordinary eye, but who, lacking the master’s naivety and sincerity, seldom reached the height of his unpretending genuineness.”³³⁰ He also wrote a number of elegies upon the deaths of several members of the ‘Abbāsī household. His student, Abu Bakr al-Ṣūlī (d. 335/946) compiled the *dīwan* (poetry collection) of Abū Nuwās (see previous, #52) as well as those of other poets.

When the caliph al-Mu'taḍid (r. 279-289/892-902) ascended the throne, Ibn al-Mu'tazz was invited to Baghdad, where he spent time at the newly built palace, enjoyed the gardens, and participated in literary events at court, composing poems on the glory of the caliph and his empire and verses attacking the caliph's enemies. This period of courtly pleasures lasted until the caliph's death and the succession of his son (al-Muktafi, r. 289-295/902-908), whereupon Ibn al-Mu'tazz retreated to a private life until the son's death. Seventeen years after his move to Baghdad, Ibn al-Mu'tazz once again became involved in palace politics when some palace notables opposed the chosen successor and instead declared Ibn al-Mu'tazz as caliph. The political tides changed quickly. Palace guards were able to resist the splinter group, then took to the offensive. His former supporters abandoned Ibn al-Mu'tazz and he fled for his life. The very same day, palace guards searching for him found Ibn al-Mu'tazz hiding in the city and they strangled him to death. It was the year 296/908.³³¹

He authored a number of works, including his *Dīwān*³³² (Poetry Collection), his *Fuṣūl al-tamāthīl*³³³ ("Exemplary Sections"), an anthology of literary references on wine, and his *Ṭabaqāt al-shu'arā' al-muḥdathīn*³³⁴ ("Classes of Modern Poets"), a biographical dictionary of poets of the 'new' style. He is perhaps most famous for his book, *Kitāb al-badī'* (The Book of the New [Style]). It was the first book in Arabic to formulate a systematic theory of Arabic poetics. There has been much debate on the influence of Aristotle's poetics on Ibn al-Mu'tazz, but it appears that he developed his work independently of any exposure to Aristotle's work. He begins the work by stating that what is alleged to be the 'new' style is, in fact, found in the Qur'ān, in *ḥadīths*, and in ancient Bedouin Arabic. The main difference, he posits, is that this new style was used only rarely and sparingly among the ancients and in the classics, whereas contemporaneous adherents of the new style have taken the same techniques and made heavy use (or even abuse) of them. He describes seventeen total categories of the new style, devoting five larger sections to those that are very new, and twelve smaller sections to what he refers to as *maḥāsīn* (beauties, or niceties). He usually begins each section with a definition, followed

by some examples from the Qur'ān, *ḥadīths*, other ancient prose, and classical poetry, ending with prose and poetry from contemporaneous sources. This arrangement is not always meticulous. The author includes examples not only of appropriate uses, but also of inappropriate usage. Also included are occasional interjections of his own comments, usually consisting of disapproval of inappropriate usage. He quotes over two hundred poets. The sources for many of his prose quotations remain uncited, with the exception of those from the Qur'ān and *ḥadīths*. His twelve smaller sections are much more sparse, some giving as few as only one example.

Keenly aware that his book was the first of its kind (and thus, almost by definition, will not be the best, once others are written in this newly invented discipline), he predicts forthcoming criticism in the numbering and definition of these categories. This innovative and indispensable work marks the beginning of an era in the study of Arabic poetry. It is a book that has been studied for over a thousand years and continues to be studied today. It has been noted that this book “has had a vivid and effective influence over the development of that branch of knowledge to which it is devoted. There are few books in this field which can compare with it in their legacy to the thought of succeeding ages.”³³⁵

Several Arabic editions of the *Kitāb al-badī'* have been published.³³⁶ Although there is no English translation of this work, a translation of the *Dīwān* of Ibn al-Mu'tazz is available, as are translations of selected verses.³³⁷ Also available is a scholarly study of the role of the Qur'ān in the *Kitāb al-badī'* of Ibn al-Mu'tazz.³³⁸

THE *DĪWĀN* OF AL-MUTANABBĪ

(*“Collected Poems”*)

Aḥmad ibn al-Ḥusayn al-Ju‘fī (d. 354/955) was born in Kūfah (modern Iraq) to a family reportedly from the Yemenī Ju‘fī tribe. Very early during his education in his hometown, he began to show an unusual intelligence and talent for poetry. The Qarmaṭī rebellion and the rebels’ subsequent attacks in and around Kūfah forced his family to flee with the young child to the western deserts, where they stayed among the Bedouin. By circumstance, he acquired at an early age an experience with ‘pure’ Arabic language that many other poets and scholars went out of their way to seek as grown adults. Returning from the desert tribes to Kūfah several years later, he focused all his energies on poetry, with the aim of emulating panegyric court poets who acquired fame and wealth. At the age of thirteen, he naturally gravitated toward the capital, Baghdad, then to Syria, where he travelled as a wandering poet. Frustrated at not having achieved his dreams of fame and wealth, he proclaimed himself a prophet and led some rebellious desert tribes in a small politico-religious revolt that began in Lādhiqīyah (Latakya, in modern Syria). Troops were sent to quell the rebellion. He was captured, imprisoned, and came to be called ‘al-Mutanabbī’ (the one who claims to be a prophet). Two years later, he was set free after renouncing his former prophetic and political claims. Having given up on a failed career in revolutionary politics, he returned to his former life as a poorly paid wandering

poet praising low-ranking regional officials. With time, his name became better known and he became court poet to the governor of Damascus (modern Syria). Political intrigues forced him to flee for his life, again to the Syrian desert, until he was finally able to become court poet in Aleppo (modern Syria) to the Ḥamdānī prince Sayf al-Dawlah (r. 333-356/945-967; see also other authors with relations to this court, such as al-Mutanabbī's student Ibn Jinnī, #38, and also al-Iṣfahānī, #44). The nine years that he spent at the court of this prince whom he truly admired earned al-Mutanabbī many enemies. When both the protection and the patience of his prince ran out, he fled for his life to Damascus, then to Egypt. There he became court poet to a patron he secretly despised. Five years later, he again fled, traveling across the Arabian desert to Kūfah, then Baghdad, where he hoped to settle but where he was opposed by his enemies among the Baghdad court literati, including Abu al-Faraj al-Iṣfahānī (see #44). He then left Iraq to Shīrāz (modern Iran) and was well-received at the court of 'Aḍud al-Dawlah (r. in Fārs 337-372/949-983, see also Ibn Jinnī, #38) but did not settle there. He instead decided to return to Baghdad. He and his son were killed in the year 354/955, attacked by bandits during their return travels.³³⁹

In addition to themes of pro-Arab favoritism over the 'foreigners' dominating his society, in his early poetry he came to adopt a moralistic stoicism that was against all religious dogma. He also exhibited a generally pessimistic attitude regarding the power of evil and the stupidity of the masses. The poems from his revolutionary period reflect a loosening of some of the classical styles and express a more personal emotional flavor. The poems from later in his life seem to balance between this revolutionary phase and the more traditional neoclassical styles. Most of the earlier criticisms levied against him had less to do with his poetry and more to do with criticism of the author himself. After his death and the deaths of his political and literary enemies, his poems began to be judged purely on their own merit. From the central Islamic lands in the East all the way to Andalusian Spain in the West, al-Mutanabbī became one of the most highly respected and widely read of all Arabic poets. In fact,

“from the 5th/11th century onwards, the name of al-Mutanabbī became a synonym for ‘great poet.’ His literary influence became one of the most considerable ever exercised on Arabic poetry.”³⁴⁰

Several editions of his *Dīwān* (“Collected Poems”) have been published,³⁴¹ as well as numerous commentaries.³⁴² His complete *Dīwān* has been translated into English³⁴³ and English translations of selections of the *Dīwān* are also available.³⁴⁴

THE *DĪWĀN* OF ABŪ FIRĀS AL-ḤAMDĀNĪ*(“Collected Poems”)*

Known as Abū Firās, al-Ḥārith ibn Saʿīd ibn Ḥamdān al-Taghlibī (d. 357/968) was born probably in Iraq to a Greek slave mother. His father was a member of the Ḥamdānī dynastic family, making the child a cousin of the future prince, Sayf al-Dawlah (r. in Aleppo 333-356/945-967), at whose court al-Mutanabbī (see previous, #54) would serve as poet. In accordance with Islamic law, the child was born free and the mother was freed at childbirth.³⁴⁵ When the child was three years old, his father was killed by his own nephew after trying to take over Mosul (modern Iraq). By the time Abū Firās was thirteen, his cousin, Sayf al-Dawlah, had conquered Aleppo (modern Syria) and the boy and his mother both moved there. Sayf al-Dawlah was a great patron of culture and the arts. In this environment, the young Abū Firās was in the midst of great poets, philosophers, and grammarians such as al-Mutanabbī (see #54), al-Fārābī (see #69), and Ibn Khālawayh (d. 370/980). At age sixteen, the young Abū Firās was appointed governor of some local territories and proved himself a capable diplomat. He joined his cousin, Sayf al-Dawlah, on numerous military expeditions against the Byzantine empire. He was taken prisoner on multiple occasions. During one such expedition, when he was thirty-one years old, he was taken back to Constantinople (modern Istanbul, Turkey) and held for four years. After being freed in a prisoner exchange, he

returned to a position as local governor. In 357/968, one year after the death of Sayf al-Dawlah, Abū Firās revolted against the son appointed as successor, but the revolt was suppressed and Abū Firās was killed.³⁴⁶

His earlier poems are longer and more classical in style, including those praising the Ḥamdānī dynasty, while later poems are shorter and focus on love and friendship, including drinking poems and hunting poems. But he is most famous for his *Rūmīyāt* (“Rome Poems”), on his years as a prisoner of war in ‘Rome’ (Constantinople). Though he did not compile his poems into a *dīwān* (poetry collection) he did write a great deal of commentary on his own poems. All of these were later compiled by his teacher and mentor, Ibn Khālawayh, and there is evidence of numerous other recensions as well. He and his poetry had already achieved fame even within his own lifetime as he “lived up to the Arab ideal of chivalry which he expressed in his poetry.”³⁴⁷

Numerous Arabic editions of his poetry have been published³⁴⁸ and, while there is no English translation of his complete works, translations of selected verses are available.³⁴⁹

AL-MA‘ARRI’S
LUẒUM MA LAM ʿALẒAM

(“The Necessity of That Which Was Not Mandatory”)

Aḥmad ibn ‘Abd Allāh ibn Sulaymān (d. 449/1058) was born in Ma‘arrat al-Nu‘mān (modern Syria) to a notable family of scholars and *qāḍīs* (judges). At only four years old, he contracted smallpox. He was fortunate enough to survive the infection but remained permanently blinded as a result. His first teacher was his father, who was also a poet. The boy exhibited at an early age an incredible ability to memorize and began composing poetry even before he became a teenager. He underwent the standard education of the scholarly class, including religious and literary studies, under teachers in his hometown and then in Aleppo (modern Syria). Many of these teachers were students or companions of the literati at the court of Sayf al-Dawlah (r. 333-356/945-967, see also #s 38, 44, 54, and 55). As a result, he was exposed at an early age to the poetry of al-Mutanabbī (see #54), whom he subsequently held in high esteem throughout his poetic and literary career. There are reports that he traveled along the Eastern Mediterranean coast to cities such as Antioch (modern Turkey), Latakya (modern Syria), and Tripoli (modern Lebanon), at which time he may have been exposed to Hellenistic philosophies. His young adult life coincided with a time of regional political instability in and around his home, with Byzantine incursions from the north and Fāṭimī incursions from the south.

His poems praising various figures from among several factions are evident in his *Saqt al-zand*³⁵⁰ (“The Spark of the Flint”), which is a collection of poems up to and including this period of his life. In his early thirties, his father died. Since his blindness, he was very close to both of his parents, and the loss of his father was deeply traumatic. Three years later, he left his hometown for Baghdad to access the libraries there. He composed several poems praising various scholars, librarians and library administrators, but refused to compose poems for the wealthy upper class of Baghdad. After less than two years away, he decided to return to his hometown and to his mother. Sadly, by the time he reached home, his mother had just died. The loss of the second of his beloved parents, while he was still grieving the loss of the first, was so incredibly traumatic that al-Ma‘arrī began a period of self-seclusion in his own home for the remainder of his life, until his own death in the year 449/1058.³⁵¹

He composed a great number of works, but it was during this last depressed period in his life that several of his most famous works were produced. The extensive correspondence in which he engaged with numerous notables, including governors, ministers, and ambassadors, have been compiled into the *Rasā’i*³⁵² (“The Letters [of al-Ma‘arrī]”), which are valuable not only for their content, but also for their extremely flowery style of rhymed prose and the included poetry. His *Risālat al-ghufrān*³⁵³ (“The Letter of Forgiveness”) describes his correspondent’s imagined death and travel up to heaven, where he meets poets and scholars commonly accused of blasphemy, then to hell where he meets Satan and more ‘acceptable’ poets. The influence of al-Ma‘arrī’s work on Dante’s *Divine Comedy* two centuries later has been the subject of numerous scholarly studies.³⁵⁴ He is also well known for his second poetry collection, the *Luzūm mā lam yalzam* (“The Necessity of That Which Was Not Mandatory”). This collection is innovative both in form (using a challenging double-rhyme scheme) and in the subject matters discussed, with the poet deliberately avoiding the common classical Arabic poetic themes. He reports in his introduction his search for truth and ascetic piety and denounces the common practice of poets extolling exaggerated

descriptions of their lovers, their drinking, their steeds, their travels, and their battles. He discounts this common practice of poets as ‘lies.’ Many of the concepts that he expounds in the *Luzūm*, such as his ascetic lifestyle, his celibacy, his veganism (remarkable for the medieval Middle East!) his opposition to all forms of violence, his anti-natalism, and his opposition to religious dogma, all reflect the generally pessimistic attitude of this period of his life. It is perhaps the combination of these factors that did not make the *Luzūm* as popular as his earlier poems. Moreover, the animus in some circles towards his perceived blasphemy persists even in modern times: a statue of al-Ma‘arrī in his home town of Ma‘arrat al-Nu‘mān was beheaded by extremists during recent conflicts in the region.³⁵⁵

Several Arabic editions of the *Luzūm* have been published.³⁵⁶ No complete English translations are yet available, but selections of the *Luzūm* have been translated.³⁵⁷ There are also translations of the *Saqt al-zand*,³⁵⁸ the *Rasā’il* of al-Ma‘arrī,³⁵⁹ and the *Risālat al-ghufrān*³⁶⁰ available in English. Also available is an interesting study on one of his works, for which he is accused by some of parodying the *Qur’ān*.³⁶¹

THE *FIHRIST* OF IBN AL-NADĪM

(“*Bibliographic Index*”)

Muḥammad ibn Ishāq al-Warrāq (d. 385/995, known as Ibn al-Nadīm) was active in Iraq during the 4th/10th century, but aside from his name and the fame of his book, we know next to nothing regarding his birth and early life. We know nothing of his family, other than that he was, like his father, a *warrāq* (bookseller/copyist), before mechanical printing, when books were copied by hand. We know that he lived in Baghdad, that he was a Twelver Shī‘ī, and that he was an acquaintance of al-Shaykh al-Mufid (d. 413/1022, the teacher of Abū Ja‘far al-Ṭūsī, #4). We also know that among his teachers were some Christian logicians and philosophers whose intelligence, openness, and tolerance he admired and adopted. He may have traveled to Mosul (modern Iraq) but, like much other biographical information about him, little is certain. We do know that he died 385/995.³⁶² We also know that the confluence of his professional responsibilities, his personal open-mindedness, and the historical accident of his presence in the cultural capital of the Old World (excepting China) at a time of literary florescence placed him in the unique position of being able to compose a work unlike any other before or since.

His *Fihrist* (“Bibliographic Index”) was intended to be, according to his own description in the book’s second sentence, “a bibliographic index of the books of all nations, from among the Arabs and non-

Arabs, that exist in the language and script of the Arabs, on every intellectual discipline”³⁶³ including information on their authors and compilers, from the dawn of that discipline to the year 377/987. It is, in essence, a catalog of every book that he had ever come across. It is divided into ten sections, beginning with a section on languages discussing various scripts and forms of writing, including Himyarī, Berber, Hebrew, and others. In this section he includes a small subsection on the Jewish Torah and Christian Gospels, followed by a larger subsection on the Qur’ān. The second section is on grammarians and philologists, divided into subsections on those of the school of Kūfah, of Baṣrah (both modern Iraq), and those who blended the two. The third section deals with historians, genealogists, and narrators of other reports. The fourth is on poets and poetry. The fifth is on *kalām* (dialectical theology) and is divided into subsections by ideology (Mu’tazilī, Sunnī, Shī’ī, Khārijī, Sūfī, etc., though he does not necessarily use these terms). The sixth is on jurisprudence, with subsections on various schools of thought. The seventh is on philosophy and logic and includes sections on ‘ancient sciences’ such as engineering, geometry, mathematics, and medicine. The eighth is on legendary tales, and includes subsections on Persian, Indian, Roman, and Babylonian sources, as well as subsections on lovers, magic, potions, and poisons. The ninth is on other faiths such as Sabeans (see al-Ṣābī, #47), Hindus, and Chinese. The tenth and final section is on alchemy and metallurgy.

Ibn al-Nadīm’s *Fihrist* represents not only the first and most complete bibliographic index of the classical Islamic centuries, but also one so uniquely situated in historical time and place as to be able to capture the enormous and explosive literary output of the intellectual melting pot that was Islamic civilization. Given the tremendous energies invested into translation of the literary heritages of neighboring civilizations that was also occurring at this time (see next section, III), this incredible work essentially constitutes an attempt at documentation of nearly all the world’s available combined knowledge.

Numerous Arabic editions of Ibn al-Nadīm’s *Fihrist* have been published³⁶⁴ as well as an excellent English translation.³⁶⁵

THE *FIHRIST* OF AL-ṬŪSĪ

(“*Bibliographic Index*”)

A concise summary of Muḥammad ibn al-Ḥasan ibn ‘Alī (Abū Ja‘far) al-Ṭūsī’s biography has already been mentioned in the entry on his exegesis (see #4). Another of his important works is his *Fihrist kutub al-shī‘ah* (The Bibliographic Index of the Books of the Shī‘ah). Clearly inspired by the *Fihrist* of Ibn al-Nadīm (see previous, #57) as well as other subsequent bibliographic indices, al-Ṭūsī’s *Fihrist* focuses almost exclusively on the books of the Twelver Shī‘ī scholarly community, with only a few exceptions. Among the exceptions are a handful of Zaydī scholars, and several Sunnī scholars who authored texts on subjects relevant to Shī‘ī concerns, such as texts on the family of the Prophet. Abū Ja‘far al-Ṭūsī reports that his intention in compiling this book was to provide a comprehensive index of all the Twelver Shī‘ī texts available to him and he mentions that, although other indices had been compiled, they were either not comprehensive, or no longer extant by al-Ṭūsī’s era.³⁶⁶ He organizes the book alphabetically by author’s name rather than thematically or chronologically, aiming specifically for ease of use as a reference tool. Within each author’s entry are included the titles of books by that author and usually some (often limited) biographical information. Entries with full names comprise the overwhelming majority of the work, followed by authors known only by their *kunā* (tektonymic

designation), and finally by those known only by their *nisbah* (adjectival surname). The index includes nearly nine hundred entries.

While numerous other indices have been compiled since Ibn al-Nadīm's, the *Fihrist* of al-Ṭūsī is the earliest comprehensive bibliographic index of Shī'ī works to have survived. Several Arabic editions of al-Ṭūsī's *Fihrist* have been published.³⁶⁷ There is not yet an English translation.

THE *FIHRIST* OF AL-ISHBĪLĪ

(“*Bibliographic Index*”)

Muḥammad ibn Khayr ibn ‘Umar al-Ishbīlī (d. 575/1179, known as Ibn Khayr) was born in Ishbīliyyah (Seville, modern Spain). We know little of his early life other than that he studied under numerous teachers throughout Andalusian Spain, including Seville, Almeria, Cordova, Granada, and Malaga. We also know that he became the *imām* (congregational prayer leader) of Cordova’s mosque and that he died in 575/1179 at Cordova.³⁶⁸

He is known for his bibliographic index, the *Fahrasat mā rawāhu ‘an shuyūkhī-hi min al-dawāwīn al-muṣannafah fī durūb al-‘ilm wa-anwā‘ al-ma‘ārīf* (The Index of That Which Has Been Reported from His Teachers from Among Compiled Collections of Branches of Knowledge and Varieties of Information), commonly known simply as the *Fihrist* of Ibn Khayr al-Ishbīlī. He begins with an introduction replete with *ḥadīths* on knowledge, on its inherent importance, the importance of its transmission, and accuracy of transmission. The author then begins to list over 1,300 books, organized first thematically, then geographically within each thematic section. He begins with a section on the Qur’ān and related sciences, including variant readings and exegetical works. He then proceeds to sections on *ḥadīths*, biographies of Muḥammad, accounts of early battles, and genealogies. This is followed by a section on jurisprudence (of the Mālikī school of thought, as was prevalent in Andalusia), including

subsections on drinks, piety, and dream interpretation. The next section includes grammatical, linguistic, and literary works. He then includes a section on other bibliographic indices that were available to him, before concluding the work with a section listing his *ijāzāt* (teachers' authorizations of mastery). The work contains over 1,300 entries and is informed by al-Ishbīlī's travels throughout Andalusia and studies with numerous teachers in the region. It is an invaluable source documenting an inventory of Andalusian literary culture in the 6th/12th century.

Several Arabic editions of al-Ishbīlī's *Fihrist* have been published,³⁶⁹ but no English translation is yet available.

IBN ISHĀQ'S
SĪRAT RASŪL ALLĀH

(*“The Biography of the Messenger of God”*)

Muḥammad ibn Ishāq ibn Yasār (d. 150/767) was born in Medinah (modern Saudi Arabia) sometime in the late 1st/early 8th century. Both of his parents were children of *mawālī* (tribal clients) and his father and uncles were all transmitters of *akhbār* (narrative reports, usually of historical content, rather than the religious reports of *ḥadīths*). We know little of his early life other than that he appears to have become well-known for his focus on historical reports of the Prophet's lifetime, especially the early battles. He travelled to Alexandria (modern Egypt) in search of additional teachers and reports, before returning to Medinah, where he faced intense opposition from several enemies, including Mālik ibn Anas (see #10). He was accused of being Shī'ī, but there is little evidence to support the accusation. Moreover, the frequency and ease with which such accusations were made in early Islamic history as a convenient method of discrediting professional or political opponents makes the accusation even less credible. There are varying reports as to exactly why his enemies opposed him, but both personal and professional objections were levied against him. They were likely the cause of his eventual departure from Medinah. He travelled to Ḥīra, Kūfah, Baṣrah (all in modern Iraq) and Rayy (modern Iran), settling finally in Baghdad. Most sources report that he died in Baghdad in 150/767

and was buried in the Khayzūrān cemetery, near the grave of Abū Hanīfah, who died in the same year.³⁷⁰

He is reported to have authored several other works, but he is most famous for his *Ṣīrat rasūl Allāh* (“The Biography of the Messenger of God”). Having collected as many reports about the life of Muḥammad as he could, he gathered them into what became the first complete surviving biography of the Prophet. The work begins with an alleged genealogy of Muḥammad traced all the way back to Adam, followed by reports of the pre-Islamic cultures in and around Arabia. The history of Mecca is traced to just before the birth of Muḥammad, followed by some clearly hagiographic reports regarding his birth and early childhood. Then accounts of his call to prophethood are included, as well as accounts of the persecution, torture and murder of early converts by the ruling Meccan elite. This portion of the narrative ends with the attempted assassination of Muḥammad himself. The accounts of the last decade or so of Muḥammad’s life comprise the largest portion of the text, from his escape to Medinah, to the subsequent battles to establish and defend the community in Medinah, to the peaceful conquest of Mecca and finally, his death and disputes regarding his successor.

In spite of the fact that it was composed generations after the events it documents, and in spite of the questionable authenticity of some of its content, the book’s value lies in its being the earliest complete surviving biography of Muḥammad and the foundational source of information for *all* future biographies, to this day. The commonly available recension of Ibn Ishāq is that of ‘Abd al-Malik ibn Hishām (d. 218/833) who modified, abridged and amended Ibn Ishāq’s accounts.

Many Arabic editions have been published,³⁷¹ as well as translations into numerous languages, including an excellent scholarly English translation.³⁷²

AL-WĀQIDĪ'S
KITĀB AL-MAGHĀẒĪ

(*"The Book of Military Campaigns"*)

Muḥammad ibn ʿUmar ibn Wāqid (d. 207/822) was born in Medinah (modern Saudi Arabia) in the 2nd/8th century to a family of *mawālī* (tribal clients) who were of Persian origin on his mother's side. His occupation was in the grain trade, especially wheat, but he appears instead to have spent much of his time collecting information about the history of early Islam. This, combined with his liberal generosity, seems to have contributed to his financial difficulties and to his accumulated debts. We do not know much else of his early life, but we do know that when the Caliph Hārūn al-Rashīd (r. 170-193/786-809) performed the *ḥajj* pilgrimage at Mecca (modern Saudi Arabia) and visited Medinah, it was al-Wāqidī who gave the caliph and his entourage guided tours of the historical sites. We also know that by age fifty he had settled in Baghdad, where he was appointed a *qāḍī* (judge) by the caliph. Ibn Saʿd (known as the 'secretary of al-Wāqidī,' see #15) was his student. The early criticism of al-Wāqidī by scholars of *ḥadīth* were the typical criticisms generally levied on *akḥbārī* transmitters, such as the use of combined *isnād* chains of transmission and the synthesis of multiple reports. Traditionists insisted on individual chains of transmission for individual reports. He was also, without much evidence and very conveniently for his enemies, accused of being Shīʿī (see also Ibn

Ishāq, previous, #60). The levying of such accusations waned in subsequent centuries as the value of al-Wāqidī's historical work became increasingly recognized. He died in 207/822 and was buried in the Khayzūrān cemetery of Baghdad.³⁷³

Among his most important works, and the only one which has survived, is his *Kitāb al-maghāzī* ("The Book of Military Campaigns"). It includes many reports similar to those found in Ibn Ishāq's work (see previous, #60), but al-Wāqidī tends to focus more on the Medīnan period of Muḥammad's biography and more on the battles in which Muḥammad himself participated. He lists the raids and battles in chronological order. For the more significant military confrontations, such as the Battle of Badr, or the Battle of Uḥud, he includes relevant subsections listing the participants, those who fell in battle, the names of those on the enemy side taken prisoner, etc. Also included are occasional sections on references to qur'ānic verses revealed on the occasion of a particular battle or its aftermath. Sometimes al-Wāqidī offers varying reports of the same incident, then mentions which report he considers more likely to be accurate. These interjections appear to be gentle reminders that he is transmitting reports, rather than 'facts.' This characteristic of al-Wāqidī's writing maintains a relative sense of scholarly detachment differentiating his work as an *akhbārī* historian from the myopic view of *ḥadīth* transmitters focused almost exclusively on *isnād* chains of transmission. Several other factors differentiate al-Wāqidī's work on the early history of Islam from the works of others. Among these are the general coherence of his reports and their orderly arrangement, the importance placed on establishing accurate chronology, his search for relatives of witnesses to the events and the gathering of oral history, and his travel to the actual locations for on-site analysis of terrain and the logistics of military engagement. The *Maghāzī* of al-Wāqidī is "of paramount importance for early Arabic historiography on account of the quantity and quality of the information which he passed on in the literature, ... for the nature of his methodology"³⁷⁴ and "the attempt to evaluate the information he received."³⁷⁵ Also, the fact that the *Sīrah* of Ibn Ishāq (see previous, #60) has survived

only in the modified version transmitted by Ibn Hishām (d. 218/833), makes al-Wāqidi's *Maghāzī* technically the earliest surviving complete source on the biography of Muḥammad, composed entirely by the author himself.

Several Arabic editions of al-Wāqidi's *Maghāzī* have been published.³⁷⁶ A complete English translation is also available,³⁷⁷ as well as translated selections.³⁷⁸

AL-BALĀDHURĪ'S
FUTŪḤ AL-BULDĀN

(*"Conquest of the Nations"*)

Aḥmad ibn Yaḥyá ibn Jābir al-Balādhurī (d. ca. 279/892) was probably born in Baghdad, where he lived most of his life. Unfortunately, we know very little of his life, not even the exact dates of his birth or death. It appears that he was of a family of Persian origin several generations prior. His grandfather was a secretary to the caliph's minister in Egypt. It was his grandfather who was believed to have suffered the ill-effects of *balādhur* (known to Europeans as 'marking nut,' *Semecarpus anacardium*), which was used by scholars in the medieval era to enhance memory-retention, and likely the reason for the family name, al-Balādhurī. Aḥmad, the grandson, traveled to Damascus and Humṣ (modern Syria), Antioch (modern Turkey) and Iraq, but settled in Baghdad. There he was a student of Ibn Sa'd (see #15), from whom he quoted directly,³⁷⁹ and an older contemporary of al-Ṭabarī (see #3). He eventually became a companion to the 'Abbāsī caliphs al-Mutawakkil (r. 232-247/847-861) and al-Musta'in (r. 248-252/862-866), but lost favor with subsequent administrations. He died probably around 279/892, reportedly due to use of *balādhur*, but this is more likely to be a misattribution of the history of his grandfather's death from *balādhur* overdose.³⁸⁰

The two works for which he is known are the *Ansāb al-ashrāf*³⁸¹ ("The Genealogies of the Nobles"), a voluminous work that is

incomplete, and the *Futūḥ al-buldān* (“Conquest of the Nations”), one of the early sources on the history of the Early Islamic conquests. The *Futūḥ* that has survived the centuries to our time is a condensed (but complete) edition of an originally much larger work that has not been seen for about four hundred years.³⁸² The author begins the work with reports of Muḥammad’s escape to Medinah after the attempt to assassinate him at his home in Mecca. The subsequent sections deal with battles in the Arabian Peninsula during Muḥammad’s lifetime, the apostasy wars during the reign of the first caliph, Abū Bakr (r. 11-13/632-4), the conquests of Syria, Palestine, and Cyprus, the conquest of Iraq and the eastern half of the fertile crescent, and the conquest of Armenia. He then includes sections on the conquests of Egypt and North Africa to Tangiers, the conquests of Andalusia and the Mediterranean islands of Sicily and Rhodes, as well as a section on the conquest of Nubia. Subsequent sections include the founding of cities in Iraq, such as Kūfah and Baghdad, and the conquests of the Persian highlands. Throughout the work, he cites some accounts with *isnād* chains of transmission and some without. He very occasionally intersperses relevant poetic verses in the accounts. In this work, al-Balādhurī gathered into a single compilation information from numerous earlier books focusing on the conquests of individual cities. The fact that the *Futūḥ* preserves information from sources now lost makes it even more valuable. Since the author’s time, the work has been indispensable for the study of the early history of Islam.

There are various published Arabic editions of al-Balādhurī’s *Futūḥ*³⁸³ as well as an English translation.³⁸⁴

AL-YA‘QŪBĪ’S *TĀRĪKH*

(“*The History of al-Ya‘qūbī*”)

Aḥmad ibn Abī Ya‘qūb ibn Ja‘far, known as al-Ya‘qūbī, was born in Baghdad. We know little of his life other than that he was an established member of the secretarial class and served in administrative roles in Armenia, in Khurāsān (a historical region spread across modern Iran, Afghanistan and Central Asia), and in Egypt, where he died sometime in the early 3rd/10th century.³⁸⁵

In addition to his geographic work, *Kitāb al-buldān* (“The Book of the Realms,” see #96) and a short treatise *Mushākalat al-nās li-zamānihim*³⁸⁶ (“People’s Adaptation to their Times”), he is most famous for his history, known simply as *Tārīkh al-Ya‘qūbī* (“The History of al-Ya‘qūbī”). It is one of the earliest universal histories in Islamic literature. It begins with accounts of the children of Adam until Moses, then the prophets and kings of the Children of Israel after Moses, followed by accounts of Jesus and various gospels. He then proceeds through brief sections on the histories of ancient kingdoms of Assyria, Nineveh, and Babylon, before continuing with more substantial sections on the kingdoms of India, the Greeks, Romans, and Persians. Next, he includes sections on the kings of China, Egypt, Copts, Berbers, Abyssinia, the Sudan, and the Yemen, followed by sections on the Children of Ishmael and pre-Islamic Arabia. Subsequent sections deal with Muḥammad, then the early

caliphs, the Umayyad dynasty, and finally the ‘Abbāsī dynasty up to and including the caliph al-Mu‘tamid (d. 297/892).

Throughout the work, he places more emphasis on documenting cultural achievements than on political history. His accounts of the Children of Israel include quotations from the Old Testament and from *midrash* (Torah commentary), and his accounts of Jesus include quotations from the New Testament and from apocryphal sources. In relevant sections on the early Islamic period, he presents valuable information on early Shī‘ī perspectives. Scholars continue to debate if he himself was actually Shī‘ī, despite the fact that professing the same political views expressed by Shī‘ī contemporaries does not necessarily make one Shī‘ī. In fact, the pro-‘Alī and anti-Umayyad stance that is evident in his work was not uncommon among Sunnī scholars during and after the ‘Abbasid revolution (see, for example al-Jāhiz, #40, who wrote a small treatise entitled *Taṣwīb amīr al-mu‘minīn ‘Alī ibn Abī Ṭālib*,³⁸⁷ [The Correctness of The Commander of the Faithful ‘Alī ibn Abī Ṭālib]). While such references clearly point to his political views, there is no definitive evidence of his religious affiliation.³⁸⁸ The *Tārīkh* of al-Ya‘qūbī is one of the earliest surviving universal histories in classical Islamic literature. In addition to historical accounts, he includes samples of correspondence written and speeches given by individuals mentioned in some of the historical accounts. He also includes various and sundry lists, including a listing of notable scholars associated with the reigns of caliphs. Unlike the *akhbārī* style of presentation by Ibn Ishāq (see #60) and al-Wāqidī (see #61), or the *ḥadīth* style presentation of history in al-Ṭabarī’s *Tārīkh* (see #64, next), al-Ya‘qūbī presents history with a style similar to some of the literary anthologies found earlier in this section on *adab*. As such, al-Ya‘qūbī’s *Tārīkh* represents one of the earliest surviving examples of literary historiography in the classical Islamic sources. This work is “especially noteworthy for its attention to the cultural peculiarities and diversity of the ancient, pre-Islamic nations and cultures it surveys” and its “unusually extensive use of non-Islamic sources... to provide a detailed account of the beliefs and practices

of the peoples he describes.”³⁸⁹ It remains one of the most important extant works of Islamic history.

Several Arabic editions of al-Ya‘qūbī’s *Tārīkh* have been published.³⁹⁰ There are not yet any complete English translations available, but a short selection has been translated.³⁹¹

AL-ṬABARĪ'S
TĀRĪKH AL-RUSUL WA-AL-MULŪK

(*"The History of Prophets and Kings"*)

A brief biography of Muḥammad ibn Jarīr ibn Yazīd al-Ṭabarī (d. 310/923) has already been provided under the entry for his qur'ānic exegesis (see #3). Among his other works, the one for which he is most famous is his *Tārīkh al-rusul wa-al-mulūk* ("The History of Prophets and Kings"). It is Classical Islam's earliest monumental history, beginning with the creation of the world and Adam and Eve. It includes the prophets of the Old Testament, the ancient kingdom of Israel and ancient Persian empire, the prophecy of Jesus, and the Byzantines, Sasanians, and other regional powers in the centuries just prior to Muḥammad's birth. The work then deals with the history of Islam, from the Prophet's time through the early caliphates and conquests. Among his other sources, al-Ṭabarī cites both Ibn Ishāq (see #60) and al-Wāqidi (see #61) for information on the early Islamic period. The chronicle proceeds through the Umayyad dynasty, the 'Abbāsī revolution, and the history of 'Abbāsī dynasty until the year 302/915 (al-Ṭabarī died in 310/923).

It is an annalistic chronicle. The compiler presents his information through the ages chronologically. However, unlike the works of some earlier *akhbārī* historians, al-Ṭabarī does not attempt to combine the information available to him to formulate a coherent

narrative. Instead, he replicates the methodology of *ḥadīth* scholarship (individual accounts with individual chains of transmission), often presenting parallel accounts that differ and sometimes even contradict each other. He does this deliberately as his intention was to document the reports available to him as objectively as possible, leaving readers to come to their own conclusions regarding the ‘facts.’ This method proved extremely useful for later historians, some of whom, such as Ibn al-Athīr (see #66), used al-Ṭabarī’s varying accounts to formulate more coherent presentations. Additionally, al-Ṭabarī’s documentation of historical accounts from sources that eventually did not survive independently made his *Tārīkh* an indispensable historical resource for all later historians. Both this work and his exegesis “form the most extensive of extant early works on Islamic scholarship and ... preserve for us the greatest array of citations from lost sources.”³⁹² The combination of all these characteristics has made this work uniquely important from the author’s lifetime to the present day.

Multiple Arabic editions have been published.³⁹³ Unique among all the works presented in this volume, and a clear indication of its importance, al-Ṭabarī’s *Tārīkh al-rusul wa-al-mulūk* has earned a collaborative effort among the international scholarly community with the aim of producing a scholarly English translation of this voluminous historical text in its entirety.³⁹⁴ There are also partial translations³⁹⁵ as well as English language scholarly works about the text.³⁹⁶

AL-MAS‘ŪDĪ’S
MURŪġ AL-DHAHAB

(*“Meadows of Gold”*)

‘Alī ibn Ḥusayn al-Mas‘ūdī (d. 345/956) was born in Baghdad to a family originally from Kūfah (in modern Iraq). We do not know the details of his early life with certainty, but knowing that he spent his childhood in Baghdad meant that, at the very least, he had access to some of the best teachers in multiple disciplines. We can be certain that he was an individual with both an unusual intellectual appetite for, and access to, an abundance of literary sources at his disposal, including not only original Arabic texts, but also Arabic language translations of Greek classics and of Persian texts. He appears to have been open-minded and religiously tolerant, as we know that he associated personally with a number of Christian and Jewish writers, as well as Zoroastrians and Sabeans. We also know that he traveled widely. We have no indication of whether these travels were professionally related (we do not even know what his profession was), or whether he had some personal wealth allowing for the expense of such extensive travels, or if his travels were funded by some other source. He does not appear to have been employed in any official government position. He did not associate officially with any well-known professional scholarly circles, nor does he appear to have been a missionary for any particular group or ideology. In any case, we

know that at the beginning of the 4th/10th century he began traveling East through Persia to India, returning to Iraq via the Yemen and Oman. He then travelled to Syria and the Byzantine frontier, then to the Caspian Sea and the Caucasus. After that he went to Egypt and made another trip to Damascus (modern Syria) and Antioch (modern Turkey) and the Byzantine frontier, before returning to Egypt. While back in Egypt, he visited Alexandria and Upper Egypt. He died in 345/956 at Fustāṭ (modern Cairo, Egypt).³⁹⁷

Of the dozens of works al-Mas'ūdī authored, all have been lost to history except for his *al-Tanbīh wa-al-ishrāf*³⁹⁸ (“Warning and Revision”) and the work for which he is most famous, his *Murūj al-dhahab wa-ma'ādin al-jawhar* (“Meadows of Gold and Mines of Jewels”). It is a historico-geographic work that is neither a history text, nor a geography text and also both. Unlike other historians and geographers, such as al-Ya'qūbī (see #63), who kept their historical scholarship separate from their geographic works, al-Mas'ūdī “combines a number of previously independent genres of Arabic literature—chronicle, biography, geographic handbook, literary anthology, encyclopedia—into a single work.”³⁹⁹ He deliberately avoids a continuous series of dry text and instead, like al-Jāhīz (see #40), deliberately inserts numerous digressions in his writing, apparently with the aim of maintaining the general reader's interest. He begins with a list of over eighty books that he consulted, mentioning that he traveled widely to gather eyewitness information as well as to benefit from local oral and written sources. He was the first historian of the classical Islamic period to devote significant attention to China, followed four centuries later by al-Hamadānī (d. 718/1319) in his *Jāmi' al-tawārīkh*⁴⁰⁰ (“The Compendium of Histories”). The *Murūj al-dhahab* is divided essentially into two halves: the first dealing with the general history of non-Muslim peoples and the second dealing with the history of Islam from Muḥammad to the 'Abbāsī caliph al-Muṭī' (r. 334-363/946-974).

The author's purpose in composing the work is summarized in his own words in a section near the end. He addresses the reader directly, stating, “We have mentioned in this book reports of the

prophets, upon them be peace, and of the kings and their biographies, and of the nations and their accounts, and of the Earth and the seas, and of what is in them among the wonders and [architectural] remains, and related matters as [a sampling] to guide [the reader] to what we have already published and as an introduction to our compositions on a variety of disciplines.”⁴⁰¹ This indicates that the *Murūj al-dhahab* we have today is simply a compilation of selections from al-Mas‘ūdī’s much more vast corpus that has, unfortunately, been lost to history. It is incredible that this work was not more widely recognized during the author’s life and in subsequent centuries. Many bibliographers such as Ibn al-Nadīm (see #57), al-Ṭūsī (see #58) and others did not even include him in their indices and appear to have been either misinformed or altogether uninformed about al-Mas‘ūdī’s works. He was clearly a sympathizer of the Twelver Shī‘īs, but neither the Sunnī nor the Shī‘ī scholarly community seems to have taken any extraordinary interest in his corpus. Some later scholars, such as Ibn Khaldūn (see #67) appear to “have been inspired by his historical method, his interest in nations foreign to Islam, ... his open-mindedness and his universal vision of history.”⁴⁰² These characteristics made al-Mas‘ūdī’s *Murūj al-dhahab* uniquely recognized in Ibn Khaldūn’s time and it retains that unique position to this day.

Several Arabic editions of al-Mas‘ūdī’s *Murūj al-dhahab* have been published.⁴⁰³ There is also a partial English translation that is dated,⁴⁰⁴ a more recent English translation of the portion of the text from the reigns of the Abbāsīd caliphs al-Mansūr (r. 136-138/754-755) to al-Mutī‘ (r. 334-363/946-974),⁴⁰⁵ and a brief English translation of selected anecdotes.⁴⁰⁶ Also available are scholarly works on al-Mas‘ūdī and on his *Murūj*.⁴⁰⁷

‘IZZ AL-DĪN IBN AL-ATHĪR’S
AL-KĀMIL FĪ AL-TĀRĪKH

(*“The Complete History”*)

‘Alī ibn Muḥammad ibn ‘Abd-al-Karīm ibn al-Athīr (d. 630/1233, known as ‘Izz al-Dīn) was the second of three brothers all born in Jazīrat Ibn ‘Umar, (modern Cizre, on the Turkish side of the confluence of today’s borders of Turkey, Syria, and Iraq) to a wealthy land-owning family whose patriarch was an official at the court of the Zangī dynasty at Mosul (modern Iraq). His younger brother, Ḍiyā’ al-Dīn (see #51), was a litterateur and active in government administration. His older brother, Majd al-Dīn, was a well-known scholar of philology and religious studies. Like his brothers, ‘Izz al-Dīn also lived in Mosul but, unlike the other two, does not appear to have been as directly involved in politics. Although he did participate in military engagements under Ṣalāḥ al-Dīn al-Ayyūbī (Latin ‘Saladin,’ r. 569-589/1174-1193), he does not seem to have ever held an official government position. He did travel on multiple occasions from Mosul to Mecca for performance of the *ḥajj* pilgrimage, each time traveling through the capital, Baghdad, and on each occasion, spending time in the capital studying with scholars there. He was also an honored guest of the ruler of Aleppo (modern Syria). Given the relative importance of his literary works, surprisingly little else is known of his biography. He died in 630/1233 at Mosul.⁴⁰⁸

Among his other works, he is famous both for his *Usd al-ghābah*⁴⁰⁹ (“Lions of the Forest”) an improvement and expansion of earlier *riḡāl* works (see Ibn Ḥibbān, #18) and for his voluminous secular history, *al-Kāmil fī al-tārīkh* (“The Complete History”). The work is a universal history, beginning with the creation of the world and Adam, continuing with major biblical prophets (Abraham, Lot, Noah, Moses, Solomon, etc.) as well as kings of the ancient world (Jamshīd, Farīdūn, Nimrod, Nebuchadnezzar, etc.) until reaching the pre-Islamic era in Arabia just before the life of Muḥammad. The author then presents the early history of Islam annalistically up to the year 628/1231. The earlier sections are essentially extracts from al-Ṭabarī (see #64), and Ibn al-Athīr has been criticized in modern times for not citing his sources. It has also been noted that he expresses a fairly clear bias in favor of his Zangī rulers, in whose administration his father and two brothers served officially. In spite of these criticisms, *al-Kāmil fī al-tārīkh* remains a valuable historical resource with significant redeeming qualities. It “represents the high point of Muslim annalistic historiography” and is “distinguished by the well-balanced selection of its vast material, by its clear presentation, and by the author’s occasional flashes of historical insight.”⁴¹⁰ It earned its place among the classical Islamic sources in the author’s own lifetime and remains an essential source in Islamic historical literature today.

Several Arabic editions of *al-Kāmil fī al-tārīkh* have been published.⁴¹¹ There is no complete English translation, but large portions have been translated into English.⁴¹²

IBN KHALDŪN'S
KITĀB AL-‘IBAR

(*“The Book of [Historical] Lessons”*)

‘Abd al-Raḥmān ibn Muḥammad ibn Muḥammad (d. 808/1406, known as Ibn Khaldūn) was born in Tūnis (the capital of modern Tunisia) to an Arab family that settled in Seville (modern Spain), but was originally from the Ḥaḍramawt region of the Yemen. Before the completion of the Christian Reconquista the family crossed the Mediterranean and eventually settled in Tūnis, where his great-grandfather served as a government official in charge of finances. Shifting political tides resulted in confiscation of his property and torture before he was finally strangled to death. His son also served in some administrative positions but eventually decided to avoid politics, a lesson learned by his own son, the father of Ibn Khaldūn, who chose instead a life of religious scholarship. Thus, Ibn Khaldūn grew up the son of a scholar and received the best classical education available. Nearby political instability led to an influx of scholars that flooded Tūnis and provided Ibn Khaldūn with access to the greatest teachers in North Africa, all before the age of seventeen. It was at this impressionable age that political chaos and the arrival of the bubonic plague led to the deaths of many in the region, including his parents. He left for Fez (modern Morocco), the intellectual center of North Africa at the time and, not even twenty years of age, was appointed a position at court as the official signature-writer

of the sultān. His greater ambitions led him to slip away from court during an invasion of the city and he traveled regionally for about a year before being summoned back. He served in court literary circles for about four years until the political winds shifted again and resulted in his imprisonment. After two years, further political turbulence and bloodshed led to his release and, eventually, appointment as secretary of the chancellery in the new administration.

Further political turmoil led him to flee between Granada (modern Spain), Fez, and Seville (modern Spain) with no shortage of court intrigues, palace revolts, and shifting allegiances between friends and enemies, until he ended up eventually at the court of Bougie (Béjaïa, modern Algeria). There he was appointed chamberlain and his brother appointed minister. It was not long before the ruler was killed and the town conquered. Ibn Khaldūn initially served the new ruler but then escaped, while his brother was arrested, but eventually set free. Ibn Khaldūn then decided to avoid politics altogether and focus on scholarly activities, but he could not resist for long the lure of intrigues that were brewing and eventually became involved in local tribal revolts. In their aftermath, he once again decided to eschew politics, but his reputation preceded him everywhere he went. He faced arrest and exile, moving from Fez, to Granada, to Tlemcen and Frenda (both in modern Algeria), and finally back in his hometown of Tūnis. There he finished his *Kitāb al-ʿibar* (“The Book of [Historical] Lessons”). Unable to escape the many enemies he had accumulated from his past political activities, he left for Cairo (modern Egypt). There he was eventually appointed chief judge and made even more envious enemies. He was dismissed from, and appointed to, various positions over the next sixteen years. Then, during an expedition to prevent Tīmūr Lang (Latin ‘Tamerlane,’ d. 807/1405) from capturing Damascus, he was abandoned by his retinue. He found himself negotiating the city’s surrender and meeting with Tīmūr, ultimately witnessing the city’s burning and pillage. On his way back to Cairo, he was robbed, but survived. He managed to return to court and was again appointed to, and dismissed from, his position as judge at Cairo six times before his death there in 808/1406.⁴¹³

He authored a number of lesser works on religious matters, including his *Lubāb al-muḥaṣṣal*⁴¹⁴ (“The Quintessence Obtained”) and his *Shifā’ al-sā’il*⁴¹⁵ (“The Healing of Seeker”), but he is best known for his universal history, *Kitāb al-‘ibar* (“The Book of [Historical] Lessons”) and more specifically, its introductory volume, known simply as the *Muqaddimah* (“Introduction”). The author divides this introduction into six parts, beginning with one on human societies and the effects of the Earth’s climates (environmental influences), followed by sections on rural societies and barbarian peoples and tribes; on states, rulers, and government institutions; on cities and civilized lands (urban civilization); on the various methods of earning a living and manufacturing (economics); and ending with a section on the branches on knowledge and the multifaceted paths to learning. The uniqueness of Ibn Khaldūn’s work is that he establishes the framework for an entirely new way, perhaps even ways, of thinking. He approached history unlike any other historian before him and was consciously attempting to create a new and scientific approach to history. He dismisses speculative philosophy and instead emphasizes empirical observation. Among other important contributions, he documents details of social psychology and economic patterns. Throughout his tumultuous life experiences, he was fated to witness a series of events that gave him unique insight into the broader currents at play in each region through which he traveled. As a result, he was acutely aware that he was living in an era of profound historical change, and sadly, that he was sensing the beginning of the end of classical Islamic civilization and the dawn of a new world order. Less importance is given generally to the remainder of the *‘Ibar* than to the introductory *Muqaddimah*. However, although it adds little information to what other sources provide regarding the Eastern Islamic lands, the *‘Ibar* does contain important information on Islamic Spain and Islamic North Africa, particularly in the centuries immediately preceding Ibn Khaldūn’s lifetime. The intellectual value of his work, largely unrecognized by his contemporaries and even by generations afterwards in his own crumbling civilization, was recognized very clearly by those outside of it. His introduction to the *‘Ibar* “turned out to contain more

or less implicitly the starting points of several avenues of research leading to the philosophy of history, sociology, economics, and yet other disciplines.”⁴¹⁶ As a result, “the atypical figure of Ibn Khaldūn in Arabo-Muslim culture has been unanimously considered, since his discovery in Europe, as that of an authentic genius.”⁴¹⁷

Numerous Arabic editions of the *Muqaddimah*⁴¹⁸ have been published, as well as editions of the entire *Ibar*.⁴¹⁹ There is also a complete English translation of the *Muqaddimah* in three volumes⁴²⁰ as well as several translations of selections.⁴²¹ Interesting scholarly studies on his life and times,⁴²² his influence in sociology⁴²³ and his role in Islamic economics⁴²⁴ are also available. He remains such a foundational figure in economics in general that he continues to be mentioned regularly in modern texts on the subject.⁴²⁵

III

FALSAFAH

INTRODUCTION TO PART III

This final section represents the third cultural and intellectual trend in Islamic civilization, that of *falsafah* (philosophy), that has, through its impact on the European Renaissance, helped to shape our modern world. In classical Islam, following the Greek masters, ‘philosophy’ included natural philosophy and thereby many of the disciplines we now consider the ‘sciences.’ Many modern students of what we now call the ‘humanities’ might be surprised to learn that the ancients classified music as a discipline of mathematics, or that subjects such as chemistry or astronomy were subcategories of natural philosophy. The philosophers, physicians, surgeons, pharmacists, botanists, biologists, chemists, mathematicians, astronomers, and geographers of Islamic civilization, many of whom were non-Muslims prominent in the scholarly circles and royal courts, played an integral role in the advance of human civilization. Some poorly-informed historians and scientists attribute to Islamic science a diminutive role in which Islamic civilization is presumed to have done little more to advance science than to preserve passively ‘Europe’s’ intellectual heritage of classical antiquity until lofty European intellects could once again access it, revive it, and advance science to modernity. This patently false Eurocentric narrative, articulated by 19th century Europeans such as Ernest Renan,⁴²⁶ is unfortunately entrenched dogma among many in the scientific community and continues to be circulated by the misinformed even in our time. One need only peruse any popular bookseller to examine titles such as “The History of Science” or “The History of Medicine.” Many such works mention ancient Greece and Galen, then neglect over 1,000 years of human history before resuming with the European Renaissance, as if there was no science or medicine on Earth in the intervening millennium. Such works would be more accurately entitled “The *European* History of Science” or “The *European* History

of Medicine.” At the opposite extreme are the views of Muslim apologists⁴²⁷ whose views also continue to be popularized even today. Fortunately, there remain also some objective historians of science who continue to note that the historical evidence paints a very different picture: that of a continuum of cumulative, incremental advances by philosophers and scientists in the millennium that linked the ancients to the European Renaissance. Regardless of whether these extreme and inaccurate views are rooted in ignorance or malice (or both), no truly objective scientist can ignore these “forgotten scientists, many from a period that modern scholarship had deemed, with the hubris that only modernism can muster, both invisible *and* unworthy.”⁴²⁸ It just such an objective view between the two extremes that I hope the reader will gain from the following entries in this third section on the classical sources in the *falsafah* tradition.

In the earliest centuries of Islam, a vast concerted effort was made to collect, compile, and translate the knowledge of earlier civilizations. But that was not all. Once the earliest translators made the knowledge of the Greeks, Egyptians, Babylonians, Persians, Indians and others available in Arabic language texts, the diverse scholarly community of Islamic civilization analyzed, synthesized, debated, criticized, and advanced that knowledge base with original contributions. This unprecedented collection of information from earlier civilizations spanning three continents blended synergistically with the efforts of a multi-religious culture yearning for the acquisition and advancement of knowledge, all of which was buttressed by both qur’ānic and broader Islamic religious injunctions towards the pursuit of knowledge. Interestingly, no other major scriptural tradition places as heavy an emphasis on knowledge, critical thinking, reflection, and reasoning as does the Qur’ān, which continuously and consistently reiterates these themes. In fact, “Muslims of all times have interpreted the Quranic counsels of ‘considering the wonders of creation’ as the most effective promotion of scientific research.”⁴²⁹ Moreover, the intellectuals of Islamic civilization, markedly unlike their counterparts in Christendom, exhibited a generally open-minded approach towards the pre-Islamic ‘pagan’ scholarship of the

Greeks and recognized the merits of scholarly writings regardless of the original authors' religious beliefs. In fact, it was a "time when all the best minds of the age and the region, regardless of their cultural origin, religious faith, or ethnic background were working together in the common task of preserving a precious heritage for the common good of mankind."⁴³⁰ All of these facts together, combined with a general tendency towards *practical application* of knowledge rather than the study of theory simply for theory's sake, led to the formation of what was to become the most scientifically advanced civilization of its time.

Beginning with the Crusades but gaining momentum centuries later, the exposure of a relatively backward Europe during its 'Dark Ages' to this scientifically, economically, and militarily advanced civilization combined with a similar thirst for knowledge, absorption of Arabic and Hebrew scholarly works, and translation into Latin, established the foundations of Europe's later Enlightenment and Renaissance. Just as Islamic civilization benefited from the compilation and translation of the available corpus of human knowledge centuries earlier, so too did Europe benefit, not only from access to lost Greek 'pagan' texts burned by Europe's Church (while preserved in Arabic), but also from the centuries of advances made by scholars and scientists of the multicultural and multireligious intellectual melting pot that was Islamic civilization. It is important to note, however, that unlike the later European Enlightenment, this scientific activity in the Islamic world was not essentially a rebellion against God. In Islamic civilization, Muslims, Christians, Jews, and others did not necessarily see any inherent conflict between science and religion. On the contrary, scientific inquiry, the advancement of human knowledge, and attempts to unveil the mysteries of God's vast created universe were, at the very least, completely consistent with religious belief, and at most, a religious duty. Whereas European Enlightenment scientists attempted to reveal the inner workings of the universe in order to prove the existence of natural laws separate from the laws of God (and the Church), the scientific culture of Islamic civilization viewed each mystery solved as *proof* of the glory

and majesty of God, the creator of the intricately complex natural laws of our universe.

We begin this section on *falsafah* with some of the most important works of philosophy,⁴³¹ the study of the very nature of knowledge itself. As with the other sciences (medicine, mathematics, astronomy, etc.) that were part of the *falsafah* tradition but which we do not today consider ‘philosophy,’ the origins of philosophy in Arabic lay in the study of the Greek masters. Simultaneous with the literary activities of the linguists, poets, and literati of the *adab* tradition discussed in the previous section, the translation of Greek philosophical works into Arabic sparked a flurry of activity among the intellectual circles forming the nucleus of the *falsafah* tradition and “while the lexicographers established an inventory of the Arabic language, the scientists provided an inventory of knowledge.”⁴³² The attempt to incorporate the vast body of knowledge from earlier pre-Islamic pagan civilizations, especially Greek philosophy and logic, into the religiously diverse intellectual milieu of Islamic civilization presented a particular challenge to monotheistic sensibilities. This challenge was met by the early Muslim philosophers, and by later Jewish philosophers as well, not adopting blindly, but adapting and synthesizing Greek philosophy and applying logical reasoning to their perspectives on divinely revealed faith. These approaches made for bitter opposition among the more fundamentalist elements of society, who felt that only religious works (such works as those mentioned in the first section) were worthy of study but, over the centuries, logic prevailed (quite literally; in fact, *very* literally). And when Christendom began to encounter similar theological debates, Europe’s philosophers found in these classical Islamic sources, translated into Latin from the Arabic and Hebrew, a philosophical road already paved, waiting for them to trod and extend further.

Among the other disciplines in the *falsafah* tradition are the related fields of medicine, surgery, pharmacology, botany, and biology. As with Islamic philosophy, the development in these disciplines began with translations of Greek sources, planting the Galenic

tradition firmly in the Islamic medical world. But, as with philosophy, the Muslim, Christian, Jewish and other practitioners of Islamic medicine, surgery, and pharmacy advanced the corpus forward into a realm where applied medicine forced a re-evaluation of Galen, and clinical observations were found sometimes to contradict earlier Greek medical dogma. The expansion of Islamic civilization across vast territories from the Atlantic to the Pacific resulted in the expansion of available *materia medica* to include animal, vegetable, and mineral matter from lands unknown to the Greeks. Perhaps most importantly, the medical tradition of Islamic civilization created distinctly new kinds of social institutions: hospitals as we know them today, with specialty wards and teaching rounds, unknown to the world prior. This civilization's tremendous contributions to the advancement of medicine were such that the works of the medical masters of Islamic civilization were taught in Europe as late as the 17th century and the names of Ibn Sīnā, Ibn Rushd, Ibn Maymūn, and Ishāq al-Isrā'īlī were all well known in Latin Europe (Avicenna, Averroes, Maimonides, and Isaac Judeus, respectively).

We see major contributions also in veterinary medicine and biology, and in botany and agriculture, as well as in physics and engineering. This is particularly the case in optics, where Ibn al-Haytham (Latin 'Alhazen') transformed the way in which we see our world and was, arguably, the first to employ the basic principles of what we now call the 'scientific method.' The history of chemistry is a field that suffers particularly from the previously mentioned dismissive Eurocentric biases, with many of the contributions made by Islamic scientists in the field of early proto-chemistry dismissed as mere 'alchemy,' that represented "an earlier and less enlightened phase of chemistry."⁴³³ This is not to say that medieval alchemical works (both in Islamic civilization and in Christendom) should be considered legitimate chemistry in the modern sense. But the wholesale dismissal of all medieval chemical works as 'alchemy,' particularly by supposedly objective scientists who have never bothered to investigate their content, is equally unacceptable. In these earliest stages of the history of chemistry there was no formal institutional

distinction between the chemical and the alchemical. But it is abundantly evident from the writings of many of these scholars and scientists that they themselves were clearly aware of the distinction. Some, like al-Kindī, Ibn Sīnā, Ibn Khaldūn, and others, were scathingly critical of the notion of transmutation, while supporting empirical scientific findings that we can consider early chemistry and that were applied in practice by medieval craftsmen.⁴³⁴ Objectively speaking, “it would be wrong to condemn medieval chemistry out of hand, since many of its techniques have stood the test of time, among them the illumination of manuscripts, the staining of glass, the dyeing of materials and the tempering of steel.”⁴³⁵ It should also be noted that philosophy was heavily intertwined with alchemy, and that such alchemical principles such as the ‘philosopher’s stone’ and transmutation of base metals into gold were based in large part on philosophical arguments about the definitions of such things as ‘matter’ and ‘essence,’ which have been debated by philosophers for centuries. Even Lavoisier, whose influence on modern chemistry is undeniable, clearly held some notions that modern scientists now find ridiculous (for example, his belief that heat was transferred from one substance to another through an invisible fluid called ‘caloric,’ and his skepticism towards the atomic theory).⁴³⁶ Those eager to dismiss wholesale all early chemical writings as ‘alchemy’ should also note that in a world where scientific and mystical arts both shared the same raw materials, equipment, instruments, processes, and techniques, it was not uncommon for scholars and scientists who relied on the support of wealthy patrons to engage superficially in some alchemy to humor their patrons, simply to maintain funding for the laboratory and resources used for legitimate scientific inquiry. The same is true for the distinction between astronomy and astrology.

In fact, perhaps nowhere were the scientific advances of Islamic civilization more instrumental to the European Renaissance, Enlightenment, and our modern world than in the fields of mathematics and astronomy, and of spherical geometry, which combined the two to form the scientific basis for accurate geography. Just as philosophers and scientists were accessing, translating, absorbing,

synthesizing and expanding the knowledge of the ancient civilizations with which they came into contact, the mathematicians of Islam also discovered that various earlier civilizations had developed different methods of mathematical calculations.⁴³⁷ The ancient Egyptian, Babylonian, Greek, and Indian methods differed in a number of respects,⁴³⁸ each with its advantages and disadvantages, but “the general aim of Arabic arithmeticians, and perhaps their chief achievement, was to fuse together the various methods available to them into one system of arithmetic based on the consistent application of the decimal place-value idea and using Indian numerals.”⁴³⁹ The mathematicians of Islamic civilization were “the first to apply algebra to geometry and to establish the foundation of this interrelation of computation with geometry—an eminent contribution toward the latter development of mathematics.”⁴⁴⁰ And, from Ptolemy’s *Almagest* and Indian sine tables “Muslim mathematicians built all six trigonometric functions,”⁴⁴¹ thereby completely transforming trigonometry. By the end of the classical era, the mathematicians of Islamic civilization “had brought mathematics a long way from the Greek and Hindu elements with which they had begun...” and their “...achievements had an impact on mathematics that is still felt today.”⁴⁴² Just as with the creation of the modern hospital, another distinctively Islamic development was that of the astronomical observatory as a social institution supporting scientific education, teaching, research, and collaboration between scientists and mathematicians.⁴⁴³ The contributions of these scientists in arithmetic, algebra, and in plane and spherical geometry, were readily applied for practical civilian and military purposes, for accurate timekeeping and directional accuracy in prayers towards Mecca,⁴⁴⁴ and for calculations of *zakāt* (alms) tax and of inheritance. Knowledge of astronomy was combined with advances in spherical geometry to enhance geography, using the stars to understand better our own Earth. One may note in particular the significance of the intellectual heritage of Andalusia, which had an immeasurable impact on Europe both before and after the Spanish *Reconquista*. To cite only two examples, the Toledan Tables⁴⁴⁵ of al-Zarqālī (Latin ‘Arzachel’)⁴⁴⁶ were the basis for the Alphonsine Tables

and later Heliocentric tables; and the first universal astrolabe, a quantum leap forward from the original Greek designs, was an Andalusian invention.⁴⁴⁷ The creation of increasingly more accurate maps of the known world combined with advances in astronomical instrumentation⁴⁴⁸ used for navigation, established the foundations for Europe's Age of Exploration⁴⁴⁹ and subsequently, a new world order.

AL-KINDĪ'S
AL-FALSAFAH AL-ŪLÁ
 (“*The First Philosophy*”)

Ya‘qūb ibn Ishāq al-Kindī (d. ca. 259/873) was known as ‘the philosopher of the Arabs’ because of his reportedly noble lineage to the Arabian tribe of al-Kindah. He was born in Irāq, likely either in Baṣrah or in Kūfah, where his father was a governor, but moved to the capital Baghdad, where he received his early education. We know very little of his early life, but we do know that he lived at the seat of the caliphate in Baghdad during a time of great intellectual florescence. He was, in fact, very close to the royal court and enjoyed the favor of both the caliphs al-Ma’mūn (r. 198-218/813-833) and al-Mu‘taṣim (r. 198-227/833-842). He even dedicated his treatise on metaphysics, the *al-Falsafah al-ūlā* (“The First Philosophy”) to al-Mu‘taṣim and served as tutor to the caliph’s son. More importantly, he was actively involved in the *Bayt al-Hikmah* (House of Wisdom) in Baghdad, an enterprise established to collect and translate into Arabic the knowledge of the great empires of the past. Among the many teams of translators involved was a team led by al-Kindī and among the works translated by this team were Greek philosophical texts by Aristotle, Alexander of Aphrodisias, Plotinus, and Proclus.⁴⁵⁰ In addition to translation, he also composed original works on philosophy, as well as on such varied subjects as music theory,⁴⁵¹ cryptanalysis, astronomy, medicine,⁴⁵² and a work on

optics,⁴⁵³ the surviving Latin translation of which influenced Roger Bacon and other European scientists.⁴⁵⁴ He also composed other practical treatises on subjects such as swords,⁴⁵⁵ meteorology,⁴⁵⁶ and the chemistry of perfumery.⁴⁵⁷ Of particular note is his support of empirical chemistry and his criticism of alchemy. His *Kūtāb fī isti'māl al-'adad al-hindī* ("Book on the Usage of Indian Numerals") helped to popularize the use of the Indian numerals (what we now call 'Arabic' numerals), a process that proved pivotal in the transformation of science and mathematics and that helped immeasurably to shape our modern world. He was a contemporary of al-Jāhīz (see #40), and his philosophical and intellectual activities placed him at the center of the contemporaneous debates raging between the Mu'tazilī circles who were favored by the caliphal government at the time and the traditionalist theologians who were against philosophical approaches to their traditional understanding of religion. With the major political changes that ensued after the accession of the caliph al-Mutawakkil (r. 232-247/847-861), and subsequent reversal of the government position to supporting the traditionalists, some of al-Kindī's professional rivals convinced the new caliph to confiscate al-Kindī's library and have him corporally punished. In time, his library was returned to him, but by then he was already aged. He appears to have died from sepsis after an infection in his knee. He died at Baghdad, presumably in the 250s/870s. The year 259/873 is one commonly cited date.⁴⁵⁸

It is difficult to overstate al-Kindī's role as one of the main figures in the translation of Greek knowledge into Arabic. He was the first philosopher to write in Arabic. He was at the cutting edge of the evolution of the vocabulary of philosophical terms in Arabic, a vocabulary that had fully matured by the time of the last great Arabic language philosopher, Ibn Rushd (see #72). Al-Kindī is credited with authoring over two hundred works but, unfortunately, less than forty have survived the ravages of history. Among these is the introductory chapter to his *al-Falsafah al-ūlā*. This first philosophical treatise in Arabic serves as "both an advertisement for, and a defense of,

philosophy”⁴⁵⁹ in Islamic society. It contains harsh criticism of traditionalist religious opposition to philosophy and posits that knowledge can come from sources other than just scripture. In fact, he takes the argument even further and states that the aim of philosophy (uncovering the truth) is essentially the same as that of religion (guiding to the truth of the Divine). He clearly follows Greek (Aristotelian and Platonic) philosophical notions, but integrates these ideas with Islamic notions of God and His created universe. Thus, this very first Arabic language philosophical treatise set the stage for the development of Islamic philosophy and presaged subsequent works authored by both Muslim and non-Muslim philosophers of Islamic civilization. Centuries later, during the next wave of civilizational transfer of knowledge, when the Arabic books of Muslim, Jewish, and Christian scholars were translated into Hebrew and Latin, these authors, in turn, left their permanent effects on Medieval Christendom and Renaissance Europe.

There are several Arabic editions of the extant portion of his *al-Falsafah al-ūlā*.⁴⁶⁰ There is a complete English translation of the surviving treatise.⁴⁶¹ Complete translations are also available of his works on swords and sword-making⁴⁶² and on meteorology.⁴⁶³ There are also translations of his works on music theory,⁴⁶⁴ of his view of the Platonic concept of the soul,⁴⁶⁵ and a work that includes some selected translations of al-Kindī’s sayings.⁴⁶⁶ Also available are numerous scholarly studies on his philosophical works,⁴⁶⁷ his conception of wisdom,⁴⁶⁸ his treatment of Aristotelian logic,⁴⁶⁹ and his book of definitions, which was the first of its kind in Arabic.⁴⁷⁰ An excellent and thorough scholarly survey of al-Kindī and his works is also available.⁴⁷¹

AL-FĀRĀBĪ'S

ĀRĀ' AHL AL-MADĪNAH AL-FĀḌILAH

(*"The Views of the People of the Virtuous City"*)

Muḥammad ibn Muḥammad ibn Tarkhān (d. 339/950, known as Abū Naṣr al-Fārābī, Latin 'Alfarabius' or 'Avennasar') was born in Fārāb, a fortress town along the Syr Darya River that was later renamed Otrār (currently an archaeological site northwest of Shymkent, in modern Kazakhstan). We know very little about his early life other than that he was born to a family of Turkic origin and that his father was a military officer, possibly a member of the caliph's Turkish guards. It is plausible that he came with his father from Fārāb to the caliphal capital, Baghdad. He studied philosophy with a Nestorian Christian teacher and mingled in Christian Aristotelian circles. We know that he was not identified with the military, bureaucratic, secretarial or merchant classes of Baghdad. Neither was he associated with the elites at court. It seems that he led a simple scholarly life, wore inexpensive clothing and consumed a humble diet. In all these things, he is unique among the other great philosophers of Islam. He was not a 'noble' Arab member of the inner circle of the caliphal court as was al-Kindī (see previous, #68), not a financially successful Persian physician as was al-Rāzī (see #84), not in high religious position such as the chief judge of Cordova, Ibn Rushd (see #72), nor was he, like Ibn Sīnā (see #70, next), born to a wealthy family and serving in government positions.⁴⁷² He worked as a

laborer in a garden and vineyard, lived on a frugal diet, and “only at night was he free to read and to study, making use of the light provided by the lamps of the night watchmen in the gardens.”⁴⁷³ In his old age he accepted an invitation to join the court of the Ḥamdānī prince Sayf al-Dawlah (r. 333-356/945-967) in Aleppo (modern Syria), who gathered around him luminaries of intellectual and literary activity such as the poets Abū Firās al-Ḥamdānī (see #55) and al-Mutanabbī (see #54). After having reached at least eighty years of age, he died in the year 339/950 at Damascus (modern Syria).⁴⁷⁴

Numerous important works have been produced by al-Fārābī. Among these are his *al-Sīyāsah al-madanīyah*⁴⁷⁵ (“[Treatise] on Civilized Government”), a philosophical text with clear political purpose. His *Iḥṣā’ al-‘ulūm*⁴⁷⁶ (“Survey of the Sciences”), on the various branches of knowledge, was translated into Latin by Gerard of Cremona (d. 583/1187) and transmitted throughout medieval Europe. Music theory, which was classically defined as a branch of mathematics, also benefited from contributions by al-Fārābī, both in his *Iḥṣā’* and in his *Kitāb al-mūsīqā al-kabīr*⁴⁷⁷ (“The Grand Book of Music”). He also translated and commented on numerous works of Aristotle and Plato. But al-Fārābī’s most famous book is his *Ārā’ ahl al-madīnah al-fāḍilah* (“The Views of the People of the Virtuous City”). It is not only perhaps his most important book, but it was also his last and, as such, the most refined articulation of his views at the end of a lifetime of philosophical and intellectual endeavor. It is also his most powerful work in terms of shaping the thoughts of his fellow members in society, since he wrote it not in the highly technical language of a limited circle of philosophers, but in more accessible language aimed at a wider readership. The author includes in the beginning a summary of the nineteen chapters of the work, describing sections on God, angels, heavenly bodies, sub-heavenly material bodies, matter and form, material ‘natural’ bodies, man and the soul, organs and limbs, male and female, the intelligent part of the soul, and the representative part of the soul. He then proceeds with chapters on man as a social creature and the different types of societies, what happens to the souls of people of excellent cities and those not in excellent cities, the rise of false and ignorant views, the

ignorant views of ignorant cities, and the rise of false views and false religions. The *Ārā'* of al-Fārābī is clearly saturated with Plato, Aristotle, and Plotinus, but represents a conspicuously Islamic revision.⁴⁷⁸ It details a hierarchy of order, from the natural universe, to nature on Earth, to the nature of the human body, and posits that mankind should “strive for the perfect state... ethical society of the highest order which conforms to the order of justice which is apparent in nature.”⁴⁷⁹ A masterpiece in Arabic that was addressed not only to Muslims but also to the Christians and Jews of Islamic civilization, al-Fārābī's *Ārā'* represents a “remarkable revival in the Muslim world of Plato's message of the philosopher-king.”⁴⁸⁰ It had an undeniable impact on later philosophers such as Ibn Sīna (see #70), Ibn Rushd (see #72) and Ibn Maymūn (Latin ‘Maimonides,’ see #73). In fact, al-Fārābī had such an impact on Ibn Maymūn, that al-Fārābī is the only philosopher mentioned by name in his *Maqālah fī ṣinā'at al-mantiq* (“Treatise on the Formulation of Logic”).⁴⁸¹ The high prominence gained by al-Fārābī among philosophical circles in the Islamic world was such that he became known as the ‘second teacher,’ with a respected status surpassed only by Aristotle himself. Latin translations of his work spread his influence and respected status to medieval Europe. His contributions to human civilization have been recognized by scientists even in our modern times: the inner Main Belt Asteroid #7057, discovered 22 August, 1990, by Henry E. Holt at the Palomar observatory in California was named in honor of al-Fārābī.⁴⁸²

There are several published Arabic editions of *Ārā' ahl al-madīnah al-fāḍilah*⁴⁸³ as well as a critical Arabic text edition with excellent scholarly English translation.⁴⁸⁴ Also available are English translations of his treatises on Aristotle's *Rhetoric*,⁴⁸⁵ on Aristotle's *De Interpretatione*,⁴⁸⁶ on Aristotle's *Analytica Priora*,⁴⁸⁷ on Plato's political writings,⁴⁸⁸ on the philosophy of Plato and Aristotle,⁴⁸⁹ on terms used in logic,⁴⁹⁰ and a short treatise on poetry.⁴⁹¹ Selections of his work on music theory have also been translated.⁴⁹² There is also a scholarly work comparing the philosophies of al-Fārābī, Ibn Sīnā (see #70, next) and Ibn Rushd (see #72).⁴⁹³ An excellent and thorough scholarly survey of al-Fārābī and his works is also available.⁴⁹⁴

IBN SĪNĀ'S
KITĀB AL-SHIFĀ'

(*"The Book of Healing [of the Soul]"*)

Commonly known as Ibn Sīnā (Latin 'Avicenna'), al-Ḥusayn ibn 'Abd Allāh ibn Sīnā (d. 428/1037) was born at his mother's hometown of Afshāna, near Bukhārā (modern Uzbekistan). His father served as a government administrator and ensured a classical education for the young Ibn Sīnā. The child's remarkable intellectual prowess quickly became clear to his teachers, who realized by the time the boy was only fourteen years old that his abilities were greater than their own. His precocious intellect absorbed texts on natural history and medicine without any teachers and in some subjects, he introduced even more advanced concepts to his teachers than those he was being taught by them. He admitted some difficulty in grasping Aristotle's *Metaphysics* but, with the explanations in al-Fārābī's (see previous, #69) commentary, he was able to manage. By the time he was sixteen years old, he was employed at the local hospital supervising already well-established famous physicians. After attending the local prince during a serious illness and treating him successfully, Ibn Sīnā was given access to the royal library, where he read voraciously and, by the age of eighteen "mastered all the then-known sciences."⁴⁹⁵ At the age of twenty-two, his father died and Ibn Sīnā began active employment in government administration. Quickly proving himself capable, he served in various ministerial positions.

Busied during the day with government business, he wrote at night. Naturally, he made enemies and attracted the attention of rival political figures. At various points in his life, he spent periods of time escaping court intrigues, living in hiding, and serving imprisonment. In fear for his safety, he was always on the move. It is said that he often wrote citing sources from memory, reportedly sometimes on horseback and even in jail. He finally ended up in the safety of the court of Isfāhān (modern Iran) for about fourteen years. He died in the year 428/1037 at the age of fifty-eight, while accompanying his prince on an expedition at Hamadān (modern Iran).⁴⁹⁶

He has written over one hundred and thirty works on philosophy, medicine, natural history, physical sciences, mathematics, astronomy, and music. Since classically defined philosophy includes natural history and mathematics, his main work on all these disciplines (excluding medicine, see also #76) is his *Kūtāb al-shifā'* ("The Book of Healing [of the Soul]"). It represents a complete and thorough survey of all the branches of knowledge classically considered *falsafah* (philosophy). Among his many philosophical works, his exhaustive and voluminous *Shifā'* has survived in its entirety. It contains treatises on matters as varied as metaphysics, psychology, natural sciences, mineralogy, the soul, plants, logic, poetry, disputation, geometry, mathematics, physics, and astronomy, among others. Two main notions are expounded by Ibn Sīnā that are of extraordinary importance. First is that of the human's certainty of being, which is perceived through the senses, presaging Descartes' (d. 1650) famous words, "I think, therefore, I am." Second is that of the Creator as the 'First Cause' in proving the existence of God. Heavily influenced by Aristotle, Plato, and (unbeknownst to him, also) Plotinus, Ibn Sīnā continued the tradition of Islamic philosophers in integrating pagan Greek philosophy with the radical monotheism of Islam, a philosophical amalgam that later had a profound and lasting influence on Christendom, once works such as the *Shifā'* were translated into Latin. The combination of his *Shifā'* and his *Qānūn al-tibb* ("The Canon of Medicine," see #76) made him an "undisputed

master in medicine, natural sciences, and philosophy” whose translated works were read by European intellectuals such as St. Thomas Aquinas (d. 672/1274), Albertus Magnus (d. 679/1280), Roger Bacon (d. ca. 691/1292), and Leonardo da Vinci (d. 1519), and “continued to be taught until the 17th century.”⁴⁹⁷

A complete Arabic edition of Ibn Sīnā’s *Shifā’* has been published,⁴⁹⁸ as well as independent sections, including those on mathematics⁴⁹⁹ and metaphysics.⁵⁰⁰ There is not yet any complete English translation of this voluminous work.

However, English translations are available of the *Ilāhīyāt* (“Metaphysics”)⁵⁰¹ and other portions of the *Shifā’*.⁵⁰² There are also English translations of his commentary on Aristotle’s *Poetics*⁵⁰³ and Aristotle’s *Rhetoric*.⁵⁰⁴ Portions of another of his philosophical works, the *Ishārāt wa-tanbīhāt*⁵⁰⁵ (“Indications and Cautions”) have also been translated into English, as have selections of his works on theology⁵⁰⁶ and poetry.⁵⁰⁷ There is also an interesting scholarly work comparing the philosophies of al-Fārābī (see previous, #69), Ibn Sīnā and Ibn Rushd (see #72).⁵⁰⁸ A critical edition and English translation of Ibn Sīnā’s autobiography is also available.⁵⁰⁹

IBN ṬUFAYL'S
RISĀLAT ḤAYY IBN YAQẒĀN

(*The Story of Ḥayy ibn Yaqẓān [Alive, son of Awake]*)

Muḥammad ibn ‘Abd al-Malik ibn Muḥammad (d. 581/1185-6) is known as Ibn Ṭufayl in Arabic literature and in Europe as Abubacer, the Latinized form of his teknonym, Abū Bakr. He was born in Wādī Āsh (modern Guadix, in Spain), just northwest of Granada. We know little of his early life or his education. His career began as a physician in Granada, where he advanced to secretary of the local governor, then secretary to the governor of Ceuta (modern Spanish territory on the African mainland, across the Strait of Gibraltar) and Tangiers (modern Morocco). He finally became court physician to the Almohad sultān Abū Ya‘qūb Yūsuf (r. 558-580/1163-1184) at Marrakesh (modern Morocco), where he was much favored. He used this position to invite other intellectuals to the sultān’s court, including a young scholar by the name of Ibn Rushd (Latin ‘Averroes,’ #72, next), who eventually succeeded him as court physician. He died in the year 581/1185-6 at Marrakesh.⁵¹⁰

Ibn Ṭufayl wrote some minor works on medicine, philosophy, and astronomy, but he is best known for his famous philosophical work, *Risālat Ḥayy ibn Yaqẓān* (The Story of Ḥayy ibn Yaqẓān [Alive, son of Awake]). It is an allegorical tale widely considered to be the first novel ever written in the Arabic language. Before Ibn Ṭufayl, Ibn Sīnā (see previous, #70), authored a tale by the same name⁵¹¹

and with similar characters and themes, but with a different structure and conclusion. Ibn Sīnā's version did not have nearly the same impact. Ibn Ṭufayl's story, however, made its mark not only on Arabic literature, but on world history and the intellectual development of human civilization. It is about a wild child set adrift at sea and eventually raised on a desert island by a gazelle mother. When she dies, he begins a journey of discovery about himself and the world around him. Without contact with any other humans, the child uses only his reasoning intellect and through seven stages, each lasting seven years, attains an understanding of the Truth. He eventually meets an ascetic who chose to retreat to the island and Ḥayy is exposed to language, religion and civilization. He and the ascetic return to society, where Ḥayy concludes that 'religion' and 'civilization' are needed by the masses for their day-to-day lives, but are ultimately unnecessary distractions from the Truth. Throughout the tale, several themes prevail. Among these is the importance of methodical scientific experimentation and an emphasis on reasoning and proofs, both in one's own thought processes and in argumentation with adversaries. Conversely, there is also an emphasis on the dangers of forcible conversion, blind faith in religious dogma, and the harm of literal readings of scripture. Combined, these emphasize the importance of freedom and tolerance and the concomitant acceptance of diversity.

A 15th century Latin translation of *Ḥayy ibn Yaqẓān* was based on a 1349 Hebrew translation but the first Latin translation from the original Arabic was published in 1671. This second translation, entitled *Philosophus Autodidactus*,⁵¹² was by Edward Pococke, Jr. (d. 1691) and had a great influence on John Locke (d. 1704), as is evident in Locke's 1690 *An Essay Concerning Human Understanding*.⁵¹³ Subsequent translations into English, German, Dutch and other European languages spread the influence of Ibn Ṭufayl throughout Europe and profoundly affected intellectual circles during the European Enlightenment. Bacon (d. 1626), Newton (d. 1626/7), Leibniz (d. 1716), Voltaire (d. 1778), Kant (d. 1804), and numerous other luminaries of European thought were influenced by Ibn Ṭufayl

to some extent.⁵¹⁴ It is difficult to ignore the influence of Ibn Ṭufayl's *Ḥayy ibn Yaqẓān* on the first English novel, Daniel Defoe's (d. 1731) *Robinson Crusoe*, and it is extremely unlikely that an intellectual such as Jean Jacques Rousseau (d. 1778) was entirely unaware of Ibn Ṭufayl when composing works such as his *Emile: or, On Education* published in 1762.⁵¹⁵ The work's effects on English Protestantism have also been noted⁵¹⁶ and even across the Atlantic, Cotton Mather (d. 1728) gives Ibn Ṭufayl the "primary rhetorical position at the very head of his *Christian Philosopher*."⁵¹⁷

The incredible power of this work, its essential messages of truth through reason, and its emphasis on freedom and tolerance are all likely reasons for its tremendous popularity and influence, both in its original Islamic milieu as well as throughout Enlightenment Christendom. We, in our troubled times of rising extreme nationalism, religious fundamentalism, and xenophobia, could all benefit from a re-reading of Ibn Ṭufayl's masterpiece.

Several Arabic language editions of Ibn Ṭufayl's *Risālat Ḥayy ibn Yaqẓān* have been published⁵¹⁸ and there are complete English language translations⁵¹⁹ as well as translated selections.⁵²⁰ There are also scholarly studies on the work itself, including those focusing on its relation to mysticism and philosophy,⁵²¹ to naturalism and traditionalism,⁵²² its influence on philosophical writing,⁵²³ cross cultural and interdisciplinary studies,⁵²⁴ as well as a comparison of the shipwrecked sailor theme in both Arabic and Western literatures.⁵²⁵ Also available are a number of works about Ibn Ṭufayl⁵²⁶ and about his influence on the European Enlightenment.⁵²⁷

IBN RUSHD'S
TAHĀFUT AL-TAHĀFUT

(*"The Incoherence of the Incoherence"*)

Muḥammad ibn Aḥmad ibn Muḥammad (d. 595/1198, known as Ibn Rushd, Latin 'Averroes') was born in Cordova (modern Spain). He is sometimes referred to as *al-ḥafīd* (the grandson) because his grandfather, also known as Ibn Rushd, was a well-known figure as well. He came from a well-respected family, his grandfather being a jurisprudent and judge who led the prayers at the main mosque of Cordova. His father also served as judge. Being born into such a lineage ensured for him a classical Arabic education comprised of qur'ānic studies, *ḥadīths*, theology, and legal studies, as well as medicine and philosophy. He reportedly memorized the entirety of Mālik's *Muwatta'* (see #10). By age twenty-eight, he was at Marrakesh (modern Morocco), where he was involved in astronomical studies. There he met Ibn Ṭufayl (see previous, #71), who introduced him at the court of the Almohad Sulṭān Abū Ya'qūb Yūsuf (r. 558-580/1163-1184). He subsequently held a series of positions including that of judge at Seville (modern Spain), then two years later at Cordova, then he succeeded Ibn Ṭufayl as court physician in Marrakesh, then he was back in Cordova as chief judge. He continued to enjoy royal attention into the reign of the succeeding sulṭān, Ya'qūb al-Manṣūr (r. 580-595/1184-1199) until political tides turned

and he fell from favor. He was brought before a tribunal, his philosophy books were burned, and he was banished to Lucena (near Cordova). Eventually, he returned to Marrakesh, where the tides turned once again and he was again welcomed at court. Unfortunately, he died soon thereafter in Marrakesh in 595/1198 and was buried there. His body was later exhumed and reburied at Cordova. Ibn al-‘Arabī (see #8), who was in North Africa at the time, returned to Andalusia to attend the funeral of this close family friend.⁵²⁸

Ibn Rushd authored dozens of works on philosophy, medicine, mathematics, astronomy, and Islamic law. Among these are philosophical works such as the *Faṣl al-maqāl*⁵²⁹ (“The [Final] Judgement in the Contention”) aiming to prove that religion and philosophy are different paths to the same Truth. He also composed other treatises or commentaries on works of Plato and Aristotle, some of which are lost in Arabic and exist only in their Latin or Hebrew translations.⁵³⁰ In the sciences, he authored works on astronomy and physics in which he articulated notions such as that of inertia, later adopted by Johannes Kepler (d. 1630), as well as a medical encyclopedia, the *Kulīyāt al-Ṭibb*⁵³¹ (“The Complete Compilation in Medicine”), known in Latin as the *Colliget*.⁵³² He also composed a well-known work, the *Bidāyat al-mujtahid wa-nihāyat al-muqtaṣid*⁵³³ (“The Beginning of Decisive Jurisprudence and the End of Non-committal Indecision”) on jurisprudence in the Mālikī school of thought. But perhaps the most famous of his works is his *Tahāfut al-tahāfut* (“The Incoherence of the Incoherence”) which is a response to the *Tahāfut al-falāsifah* (“The Incoherence of the Philosophers”) written by al-Ghazālī (see #23) to discredit Islamic philosophers’ intellectual approach towards theological matters. The original attack by al-Ghazālī consisted of a total of twenty sections and, with two minor exceptions, Ibn Rushd’s rebuttal essentially mirrors al-Ghazālī’s structure and responds to each of the allegations in turn. This is somewhat unfortunate, since al-Ghazālī’s presentation is rather disorganized and, as a result, Ibn Rushd’s response suffers from some problems of presentation, but Ibn Rushd’s point-for point rebuttal is clearly intentional. An initial sixteen discussions are on matters such as eternity, time, and motion;

God as creator, His nature, and His unity; and the nature and movement of time and the heavens. These are followed by four additional discussions on matters such as cause and effect, the human soul, immortality, and physical resurrection. In this work, just as in many of his others, Ibn Rushd attempts to find a harmonious reconciliation between Islamic faith and the Islamic variants of Greek philosophy.⁵³⁴

While not so well received in Islamic lands (al-Ghazālī's ideas had already gained widespread popularity and planted deep roots in Islamic society), Ibn Rushd's works were translated into Latin and had a profound effect on European thought. The flood of Greek philosophical ideas into Europe through original works of Islamic philosophy and through Arabic translations of Greek sources lost or deliberately destroyed by the Church as 'pagan blasphemy,' all translated into Latin, sparked in Europe many of the same controversies between faith and reason that raged in the Muslim world during the earlier centuries of Islam. Similar variations of a number of strains of thought evolved in Europe, including one along the lines of Ibn Rushd's position that faith and reason both lead to the same Truth, but through different paths. Some well-known figures such as Thomas Aquinas (d. 672/1274) even wrote against the proponents of this line of thinking.⁵³⁵ In spite of the limited influence his philosophical works exercised on the Islamic world, Ibn Rushd was the 'last great philosopher in Islam' and his influence "on European thought during the Middle Ages and the Renaissance has been immense."⁵³⁶ This was the case not only for Christian thought but also on Jewish thought (see Ibn Maymūn, #73, next).⁵³⁷ In fact, it is "because of translations from Arabic into Latin in the thirteenth century that Averroes is a widely recognized figure in the history of philosophy today."⁵³⁸

Several Arabic editions of Ibn Rushd's *Tahāfut al-tahāfut* are available⁵³⁹ as well as a complete scholarly English translation.⁵⁴⁰ There are also works that include selections of the *Tahāfut al-tahāfut*.⁵⁴¹ His *Bidāyat al-mujtahid* is available in a modern English translation,⁵⁴² as are his *Faṣl al-maqāl*⁵⁴³ and several of his treatises on the works of Plato and Aristotle.⁵⁴⁴ Also available is a partial

translation of a classical biography of his life.⁵⁴⁵ Among the numerous scholarly works on Ibn Rushd and his works is one comparing his philosophy with those of al-Fārābī (see #69) and Ibn Sīnā (see #70).⁵⁴⁶

IBN MAYMŪN'S
DALĀLAT AL-ḤĀ'IRĪN

(*"Guidance of the Perplexed"*)

Mūsá ibn Maymūn al-Qurṭubī (d. 601/1204, Moshe ben Maymon in Hebrew and Latin 'Maimonides') was born in Cordova (modern Spain) to a scholarly family well established among the Sephardic Jewish community of liberal Islamic Andalusia. His early education was in his hometown of Cordova where he studied Torah with his father and also showed an interest in, and affinity for, philosophy and the sciences. When the puritanical al-Muwahḥidūn (Latinized 'Almohad') dynasty that was rampaging across North Africa invaded the formerly well-integrated Andalusia and began persecuting Jews, Christians, and even Muslims of whom they did not approve, Ibn Maymūn and his family left Cordova for North Africa. The family settled for some time in Fez (modern Morocco), where he composed his famous *Kitāb al-Sirāj* ("The Book of Light"), a commentary on the Mishnah (also known as the 'oral Torah'). From there, he traveled to Jerusalem and then settled in Egypt for the remaining thirty-six years of his life. There, he played a major role in securing the release of Jews held hostage by the Crusader Christian King Amalric (r. 558-569/1163-1174), who invaded Bilbays (modern Egypt) and indiscriminately massacred both Muslims and local Coptic Christians. In Egypt, he was appointed the *Negid* (at the time, both a religious and political leader) of the local

Jewish community. It was also in Egypt that he invested heavily in a business venture, during which his younger brother drowned at sea on the way to India. Ibn Maymūn was deeply affected by this tragedy. The subsequent financial insecurity also forced him to begin working as a physician, at which he excelled. It is alleged that he served as court physician to Ṣalāḥ al-Dīn (Latin ‘Saladin’) al-Ayyūbī (r. 569-589/1174-1193) and was even invited to serve Richard I (the ‘Lionheart,’ r. 585-595/1189-1199), but historians have disputed both notions. Historians also debate whether, upon facing persecution from the new invaders of his hometown of Cordova, he converted to Islam, feigned conversion to save his life, or did not convert at all. The question of his personal religious affiliation is entirely irrelevant for our present purposes. This remarkable scholar’s works, nearly all of which were written in Arabic, constitute an undeniable contribution to the literature of Islamic civilization that speaks for itself. He died in Fuṣṭāṭ (modern Cairo, Egypt) in 601/1204 and, according to most sources, was reburied, according to his wishes, at Ṭabarīyah in Palestine (Roman Tiberias, modern Tveria, Israel).⁵⁴⁷

Among Ibn Maymūn’s Arabic language works are his *Maqālah fī šinā‘at al-mantiq*⁵⁴⁸ (“Treatise on the Formulation of Logic”), said to have been written when he was sixteen years old. It evidences an early pattern of thought that is later reflected in the clear, concise, and logical presentations we see in his other works, such as the above-mentioned commentary on the oral Torah, the *Kitāb al-Sirāj*.⁵⁴⁹ He also authored a number of medical works on a wide array of topics. Of note is the fact that his medical education was heavily influenced by Ibn Zuhr (see #78), who is quoted by Ibn Maymūn more than any other source in his *Aphorisms*.⁵⁵⁰

Perhaps Ibn Maymūn’s most famous work is his *Dalālat al-ḥā’irīn* (“Guidance of the Perplexed”). As with most of his writings, the *Dalālah* was written in the Arabic language using Hebrew characters (Judeo-Arabic). It was translated into Hebrew in 601/1204, the year of Ibn Maymūn’s death, by Samuel ibn Tibbon (d. ca. 627/1230) and modern Hebrew editions have also been published.⁵⁵¹ It is a philosophical work heavily influenced by al-Fārābī (see #69) and

echoes in Jewish intellectual circles the same philosophical dilemmas addressed by Islamic intellectuals attempting to reconcile Abrahamic monotheism with the rational philosophy of the polytheistic pagans of ancient Greece. The title of the work itself points to the fact that contemporaneous Jewish intellectuals, for whom both Greek logic and Mosaic faith were undeniable, remained perplexed by the apparent contradictions of the two world-views. After an introduction that includes a dedication, an explanation of the purpose of the work, and instructions on how best to make use of it, the *Dalālah* is structured in three parts. The first covers a number of terms in biblical Hebrew and an explanation of their metaphorical versus literal meanings, a discussion of how the word of God is written in the language of man, and discussions on the human intellect and proofs of several theological issues (he even uses the term *kalam*, Islamic dialectical theology) including God as the Creator, the ‘first cause’ (see Ibn Sīnā, #70), and the unity of God. The second section encompasses philosophical propositions used to prove such matters as the existence of God, the creation of the universe, the role of prophecy, and prophetic visions. The third section addresses matters such as free will, evil and its varieties, God’s omniscience, Divine Law, and includes subsections on details of the Law of Moses. Biblical quotations are cited throughout, as subjects of discussion and interpretation, and also as evidence to prove certain points.

The monumental impact of this work in transforming Jewish thought in the medieval era can hardly be overstated. Itself heavily influenced by Islamic philosophy, the *Dalālah* addressed within the Jewish community many of the same theological debates raging within the Muslim community. The *Dalālah*, in turn, influenced European Christians such as Thomas Aquinas (d. 672/1247), John Duns Scotus (d. 708/1308), and Emmanuel Kant (d. 1804), once Latin translations allowed them to tackle the same issues as their Muslim and Jewish counterparts. As with his predecessors, Ibn Maymūn also suffered the criticism of traditionalist members of his community, who emphasized the literal word of God and who considered blasphemous the very notion that rational thought could be

applied to the sphere of religion. Some detractors even mocked the work employing a play on words, referring to it as *ḍalālah* (misguidance, leading astray) rather than *dalālah* (guiding) of the perplexed.⁵⁵² Similar sentiments remain among Jewish fundamentalists today, who emphasize more ‘acceptable’ aspects of Ibn Maymūn’s work over those of his positions they find less palatable. Nevertheless, the enduring legacy of Ibn Maymūn’s medieval Arabic writings in the crystallization of modern Jewish thought and his unique place in Judeo-Islamic history are impossible to deny.

There is a very recent Arabic edition of the *Dalālah*,⁵⁵³ several complete English translations,⁵⁵⁴ as well as a partial translation from the third section, on the Laws of Moses.⁵⁵⁵ There are many scholarly works about the very popular *Dalālah*.⁵⁵⁶ Portions of his *Kitāb al-Sirāj* have been translated into English.⁵⁵⁷ There are English translations of several of his medical works, including treatises on hemorrhoids,⁵⁵⁸ asthma,⁵⁵⁹ and antidotes.⁵⁶⁰ There is also a complete scholarly translation of his *al-Fuṣūl fī al-ṭibb* (“Aphorisms in Medicine”).⁵⁶¹

‘ALĪ IBN AL-‘ABBĀS AL-MAJŪSĪ’S
AL-KĀMIL FĪ AL-ṢINĀ‘AH AL-ṬIBBĪYAH

(“*The Complete [Book] on the Medical Profession*”)

‘Ali ibn al-‘Abbās al-Majūsī (d. between 371-384/982-995) was born in Ahwāz (modern Iran) to a Persian family. His family name, al-Majūsī (cognate with the biblical term ‘Magi’) indicates that his family was Zoroastrian, and likely that he was as well. Although he himself could have been Muslim, as his father’s name (‘Abbās) is a Muslim name, that is not necessarily the case. Note that the father of Ibn Maymūn (Maimonides, see previous, #73), Maymūn, was Jewish but also known by the Muslim name ‘Ubayd Allāh. Then, as now, many minorities maintained ethnic or religious names used privately within their families and communities in addition to the public names used to integrate into the dominant culture. As with the other books by authors of Sabea, Christian, and Jewish heritage who are on our list, the work of ‘Alī ibn al-‘Abbās is another example of the cultural and religious diversity of the intellectual melting pot that was Islamic civilization. Very little is known of his early life other than that he moved eventually to Shīrāz (modern Iran) and studied medicine there. We also know that he was personal physician to ‘Aḍud al-Dawlah, ruler of the Buwayhī dynasty (r. 337-372/949-983, in Fars and in Iraq, see also #45 and #54) and served in the al-‘Aḍudī hospital that the ruler founded in Baghdad. We do not even know

with certainty the precise location or date of his death. We know only that he likely died between the years 371 and 384/982 and 995.⁵⁶²

The work for which he is best known is his *al-Kāmil fī al-ṣināʿah al-ṭibbīyah* (“The Complete [Book] on the Medical Profession”). It was dedicated to his ruler and patron, ‘Aḍud al-Dawlah, which is why it was sometimes called *al-Kitāb al-malakī* (“The Royal Book”) and known in Europe as *Liber Regius*. The work was “immediately recognized as a masterpiece and was adopted as the chief textbook of medicine for students”⁵⁶³ in medical schools in the Islamic world. A partial translation and adaptation by Constantine the African (d. before 491/1098) was also the main work at the *Scuola Medica Salernitana* in Salerno, the most important center for medical education in Western Europe at the time. The book systematically presents Galenic medical theory without the associated astrology or magic. It consists of twenty chapters. The first half consists of chapters on medical theory. These include an introductory section that provides a general introduction to medicine, a discussion of the medical writings of Hippocrates and others, a discussion of important works with which one must be familiar before reading *al-Kāmil*, and an introduction to the book and its usefulness. These are followed by a description of sub-disciplines in medicine, a description of clinical signs that can be objectively observed by the physician, discussions of various illnesses by organ system, and descriptions of the influence of environment and of personal habits on the development of illness. The chapter ends with sections on each of the four ‘humors.’ The second chapter is on anatomy, beginning with bony anatomy from the skull inferiorly to the toes, then cartilage, marrow, ligaments and tendons, muscle and fat, membranes and skin, and ending with a section on hair and nails. The third deals with muscular anatomy and internal organs and ends with male and female reproductive organs. The fourth is on natural, physical, and spiritual energies that sustain life, on respiration, the reasons for death, and the five senses. The fifth chapter is on ‘unnatural’ matters (i.e., external environmental factors) such as seasonal changes, geographic location, occupation, bathing and hygiene, dietary factors, sugar, salt, and

alcoholic beverages, clothing, sleep, sexual activity, and the like. The sixth is on a description of disease states and symptomatology, beginning with changes in the five senses, appetite, behavioral changes, and ending with urine, sweat, and menses. The seventh is on signs, including sections on pulse and urinalysis. The eighth is on illnesses with visible manifestations, such as various types of febrile illnesses, tumors, smallpox, leprosy, vitiligo, pruritus, blisters and ends with sections on bites and stings from venomous creatures such as snakes and scorpions. The ninth is on illnesses with internal causes, beginning with generalized illnesses such as stroke, epilepsy, and melancholy, then continuing with illnesses categorized anatomically from head to toe. The tenth is on important warning signs for the physician, including those indicating a lengthy illness, as well as those indicating the approach of death.

The second half covers medical practice. The eleventh chapter deals with preventative medicine, including health maintenance in accordance with the seasons, exercise, rest, diet, hygiene, sexual activity, mental health, and preventative health for infants, children, teenagers, the elderly, and ends with a section on preventative medicine for travelers by land and sea. The twelfth is on medications, including testing the strength, characteristics, and consistency of medications, followed by sections listing of medications by physiological action, then by vegetable sources, mineral sources, and animal sources, and ending with a section on selecting the appropriate medications and preserving them. The thirteenth is a chapter on fevers, listing nearly twenty different types of febrile illnesses as well as subsections on symptoms that typically accompany fevers, before concluding with sections on soft tumors, solid tumors, and cancers. The fourteenth chapter covers smallpox, measles, leprosy, lice, punctures and other wounds, burns, bites from animals, arachnids and insects, and antidotes for patients who have consumed a variety of liquid toxins. The fifteenth chapter lists treatments by disease processes from the head to the neck, and the sixteenth begins with treatment of suffocation and drowning and proceeds to disease processes of the thorax. The seventeenth deals with pathologies of

the abdomen down to the bladder, and the eighteenth with external genitals and reproductive organs of males and females, obstetrical pathologies, and arthralgia. The nineteenth chapter is on procedures, including minor procedures (such as ingrown eyelashes and nails, hemorrhoidectomies), major surgeries (such as endarterectomies, mastectomies, obstetrical surgeries), removal of foreign bodies (arrows and daggers), cauterization (both external and internal abdominal) and the treatment of fractures and dislocations. The final chapter is on the measurement and application of compound medications, pastes, oils, pills, and tablets, and treatments for various illnesses, concluding with treatment for pica.

The work is unique not only for the author's systematic approach in his writing, but also in the practice of medicine. Throughout the work, there is an emphasis on physician-patient interaction and on methodology. 'Alī ibn al-'Abbās addresses the anatomy and physiology of the brain and nervous system, presenting the earliest documented systematic and detailed discussion of nervous disorders such as hypochondriasis, coma, epilepsy, and hemiplegia. Also, he does not limit medicine to physical medicine. He discusses both medicine and psychology, showing a clear recognition of both psychosomatic and somatopsychic pathologies and emphasizing the relation between physical and mental health.⁵⁶⁴ Also very important is the fact that he emphasized preventative medicine and especially dietary medicine before resorting to the pharmacist's formulary only as a last resort. In this, he preceded the increasing popularity of this model among today's health-conscious population by over a thousand years. This tremendously influential medical text continues to be recognized as a foundational source in the history of medicine, both in the Islamic world and throughout Renaissance Europe. The *Liber Regius* was printed in Venice in 1492 and in Lyons in 1523. Latin translations continued to be circulated in Europe up to the 16th century. The reputation of Haly Abbas was so well-known in European culture that he is one of several physicians of Islamic civilization mentioned in Chaucer's *Canterbury Tales*.⁵⁶⁵

‘Alī ibn al-‘Abbās al-Majūsī’s *al-Kāmil fī al-ṣinā‘ah al-ṭibbīyah* is available in several Arabic editions.⁵⁶⁶ The ophthalmology section is also available separately in an Arabic edition.⁵⁶⁷ There is not yet any English language translation, but a scholarly study on ‘Alī ibn al-‘Abbās and Constantine the African is available for interested readers.⁵⁶⁸

ABŪ AL-QĀSIM AL-ZAHRĀWĪ'S
AL-TAṢRĪF LI-MAN 'AǾIṢA 'AN AL-TA'RĪF

*(“The Arrangement [of Medical Knowledge]
 for One Unable to Compile [It Himself]”)*

Known as Abū al-Qāsim (d. after 400/1009, Latin ‘Albucasis,’ and sometimes ‘Alzaharavius’), al-Khalaf ibn ‘Abbās al-Zahrāwī is a man about whom we know shamefully little in comparison to his enormous contributions to the field of surgery. From his *nisbah*, al-Zahrāwī, we know that he was likely born in Madīnat al-Zahrā’, near Cordoba (modern Spain) where he appears to have lived most of his life. A royal palace and administrative complex were built there by the Andalusian rulers in the early 4th/10th centuries and some theorize that he served as official court physician to the ruling dynasty, but there is no definitive evidence of that. We are certain neither of the date nor location of his birth nor of his death, but it seems that he died in Andalusia sometime after the year 400/1009.⁵⁶⁹ Ibn Ḥazm (see #34), who died in 456/1064 and who reportedly met al-Zahrāwī, mentions in his treatise on the literature of Andalusia that “no one in medicine has written a better summary.”⁵⁷⁰ Leo Africanus (al-Ḥasan ibn Muḥammad al-Wazzān al-Fāsī, d. ca. 1554), in his *De viris quibusdam illustribus apud Arabes* states that al-Zahrāwī died at the age of one hundred and one in the year 404/1013.⁵⁷¹ We know little of his biography with certainty.⁵⁷²

His only surviving work is the immensely influential *Kūṭāb al-taṣrīf li-man ‘ajiza ‘an al-ta’līf* (“The Book of Arrangement [of Medical Knowledge] for One Unable to Compile [It Himself]”). It is composed of a total of thirty treatises, the majority (twenty-five) of which are smaller treatises addressing *materia medica* and their formulation and administration in various forms (oral, topical, etc.). The first is on constitutional elements, human anatomy, and compound drugs. The second is on diseases, symptoms, and treatments. The twenty-sixth, twenty-eighth, and twenty-ninth deal with dietary remedies arranged by illness, medical uses of minerals, and drug nomenclature and measurement, respectively. Three of these have been translated into Latin via Hebrew translations of the original Arabic, the first two treatises together as *Liber theoricæ nec non practicæ Alsaharavī* and the twenty-eighth treatise independently as *Liber Servitoris*.⁵⁷³

The thirtieth treatise is on surgery and comprises roughly 20% of the entire work. It stands out as “the first rational, complete, and illustrated treatment of its subject.”⁵⁷⁴ Throughout the work, this humble author never claims the respect he deserves, rather, he states that his aim is to ‘revive’ the ancient art and to reclaim it from the bonesetters and charlatans who have hijacked it from its professional tradition. His main source was Paulus Aegineta’s (d. ca. 71/690) *Epitomes iatrikes biblia hepta* (“Medical Compendium in Seven Books,” itself mainly a compilation of earlier works constituting the medical knowledge available to the Byzantines), but al-Zahrāwī added significant observations of his own. Among the characteristics making this work unique is the fact that he includes actual case studies of surgeries that he performed himself. He was, for example, the first to describe and document a tracheotomy. Moreover, while many previous surgical treatises provided textual treatments of the subject, al-Zahrāwī’s work is the earliest extant surgical treatise to include illustrations of surgical instruments. The work includes descriptions of surgeries and diagrams of instruments that were most likely invented by him, as they are not mentioned in any earlier classical medical or surgical texts. Some examples include the first detailed descriptions of a

syringe, a paracentesis trocar, a retractable blade, a specialized instrument for tonsillectomy, various obstetrical and gynecological instruments such as vaginal speculae, as well as a reducing table for dislocations and fractures, among others. The work had a great impact in the Islamic world, and possibly an even greater impact on Europe. In Toledo (modern Spain), Gerard of Cremona (d. 583/1187) first translated the work into Latin and “its influence thenceforth on Italian and, subsequently, French surgeons was enormous.”⁵⁷⁵ The work of al-Zahrāwī “widely influenced European surgical writing, especially that of Guy de Chauliac (d. ca. 1370) and through him the subsequent writing for several centuries.”⁵⁷⁶ The surgical treatise in al-Zahrāwī’s *al-Taṣrīf* laid the foundation for European surgery, and consequently, our modern inheritance, with the author succeeding in his stated aim of reviving and refining the ancient art.

Several Arabic editions of the thirtieth treatise, on surgery, have been published,⁵⁷⁷ as well as an excellent scholarly critical edition of the Arabic text with English translation.⁵⁷⁸ Also available in the original Arabic (as well as Spanish translation) are treatises on orthodontics,⁵⁷⁹ on ophthalmology,⁵⁸⁰ and on medicinal powders.⁵⁸¹ There are also scholarly studies on the illustrations in the treatise⁵⁸² and on the pharmaceuticals mentioned.⁵⁸³ Interested readers should be aware that a rare and beautiful printing of a portion of an illustrated Latin (Gerard of Cremona) manuscript of al-Zahrāwī’s treatise is available.⁵⁸⁴

IBN SĪNĀ'S
AL-QĀNŪN FĪ AL-ṬIBB
 (“*The Canon of Medicine*”)

A brief summary of Ibn Sīnā's (d. 428/1037, Latin 'Avicenna') biography has already been provided (see #70). Worth reiterating is the fact that, due to his incredibly precocious intellect, by the time he was only sixteen years old, he was employed at the local hospital supervising a number of established physicians. He composed a great number of works on a variety of subjects, but was most famous as a philosopher and physician. His main philosophical work was the *Kūtāb al-shifā'* ("Book of Healing [of the Soul]," see #70) and, in spite of his mastery of abstract philosophical ideas, he remained rooted, as did many of the scientific minds in Islamic civilization, in tangible, practical applications of the theoretical disciplines. In his medical writings, he sometimes treats signs and symptoms as parts of a logical syllogism, with illness and health seen as the results of very clear causes and effects. His main medical work was the encyclopedic *al-Qānūn fī al-ṭibb* ("The Canon of Medicine"), which served as an organized compilation of all medical knowledge available to him at the time. It was not long before this medical encyclopedia replaced the *al-Kāmil* of 'Alī ibn al-'Abbās al-Majūsī's (see #74) as the standard textbook in medical schools throughout the Islamic world and, after translation into Latin, also in Europe.

Ibn Sīnā's *Qānūn* is organized into five sections. The first is on defining medicine and its various aspects. It includes an anatomy of the human body with sections on bones, muscles, arteries, and veins; causes of illness, signs and symptoms, and examination of pulse and urine; and sections on preventative medicine in pediatrics, adult medicine, and geriatrics. The second section begins with a subsection on pharmacology, which includes descriptions of proper medical experimentation presaging the modern scientific method. This is followed by *materia medica* listed in alphabetical order. The third section is on pathology and organized by organ system, beginning cephalad with head and ENT pathologies, and proceeding caudally through thoracic, cardiac, and abdominal pathologies, followed by sections dedicated to male pathologies and gynecological pathologies. The fourth section includes tracts on fevers, on physical examination of signs and descriptions of symptoms, on tumors and pustules, wounds, subluxations, fractures, edible poisons and venomous bites, and on dermatology. The fifth covers pharmacology extensively, divided into sections on pastes, oils, pills, ointments, dressings, and the like. These are followed by sections on compound medications, organized by the ailments they treat and listed generally from cephalad to caudad, and the book ends with assorted ailments such as menopausal hot flashes, gout, and alopecia.

Some of the shorter sections were copied independently and disseminated widely, such as the treatises on examination of the pulse, on diarrhea, and on preventative medicine. He also composed a poem summarizing theoretical principles and practical applications of medicine, called the *Urjūzah fi al-ṭibb*⁵⁸⁵ ("Poem [in the *Rajaz* Meter] on Medicine," popularized in Latin as *Cantica Avicennae*). Ibn Sīnā's contributions in advancing ancient medicine through the medieval era to our modern time is undeniable. His name was so well known in medieval Europe, that he is mentioned, along with 'Alī ibn al-'Abbās, al-Rāzī, and Ibn Rushd (see #s 74, 84, and 72, respectively) in Chaucer's *Canterbury Tales*.⁵⁸⁶ Ibn Sīnā's *Qānūn* "formed the basis of teaching at all [European] universities. It appears in the oldest known syllabus of teaching given to the School of Medicine at Montpellier, a

bull of [Pope] Clement V, dating from 1309”⁵⁸⁷ and “served as a basis for seven centuries of medical teaching and practice.”⁵⁸⁸

Several Arabic editions of Ibn Sīnā’s *Qānūn* are available.⁵⁸⁹ There is no complete English translation of the entire *Qānūn*, but an English translation of first of the five sections is available.⁵⁹⁰ There is also an English translation of his treatise on cardiac drugs.⁵⁹¹ Also available is a scholarly study of the role of the *Qānūn* in European Renaissance medicine.⁵⁹² Of significant historical note is the fact that Ibn al-Nafīs (d. 687/1288) was the first physician to provide an accurate description of pulmonary (lesser) circulation,⁵⁹³ documented in detail in his commentary⁵⁹⁴ on the anatomy section of Ibn Sīnā’s *Qānūn*. Ibn al-Nafīs documents on five separate occasions⁵⁹⁵ an accurate explanation of the pulmonary circulation centuries prior to Miguel Servetus (d. 1553), Realdo Colombo (d. 1559), and, finally, William Harvey (d. 1657), who is commonly and inaccurately credited with the discovery.⁵⁹⁶

‘ALĪ IBN ‘ĪSÁ’S
TADHKIRAT AL-KAḤḤĀLĪN

(“*The Reminder [Notebook] of the Ophthalmologists*”)

‘Ali ibn ‘Īsá, also known as al-Kaḥḥāl (the ophthalmologist), lived in the early 5th/11th century in Baghdad. Other than that, we know very little about him with certainty and what little information we do have from various sources is contradictory. He is often confused with ‘Īsá ibn ‘Alī (Latin Jesu Haly), another famous physician active more than a century earlier. Our ‘Alī ibn ‘Īsá was himself a Christian and student of another Christian physician in Baghdad who composed a commentary on Galen. We know from his surviving texts that he must have been a kind and conscientious physician as his writing is imbued with injunctions for the practitioner and reader in the spirit of that to which we refer today as ‘patient-centered care.’⁵⁹⁷

We know of only two works attributed to him. A single manuscript of *Kūtāb al-manāfi‘ al-latī tustafād min a‘dā’ al-ḥaywān* (“Book on the Uses Benefited from Parts of Animals”) is currently in Berlin and has not yet been published. His fame, however, rests on his *Tadhkirat al-kaḥḥālīn* (“The Reminder [Notebook] of the Ophthalmologists”). It begins with a brief introduction in which he states that, in response to numerous requests, he has compiled the work as a concise summary of the choicest information from the works of Galen, the Alexandrians, Dioscorides, Paulus, and others, all gathered, re-arranged, and organized for ease of reference. The work is

divided into three parts. The first contains twenty-one sections, beginning with introductions to the eye, its form, function, and composition, as well as sections on coloration, moisture of the conjunctiva and cornea, anatomical layers of the cornea and lens, origins and insertions of ocular musculature, and other anatomical details. The second part has seventy-three sections and is entitled “diseases that are external to [accessible to the physician’s] sensation, their causes, signs, and treatments.” Among the many ailments listed are ingrown eyelashes, glandular infections, conjunctivitis, ocular gonorrhea, corneal blisters, abrasions and tears, cancers, embedded foreign objects, pupillary mydriasis and miosis, and cataract surgery. The third part has twenty-seven sections and is entitled “diseases that are hidden from [the physician’s] sensation and their causes, signs, and treatments.” Among these are included optic nerve compression, optic nerve tumors, near- and far-sightedness, night-blindness, amblyopia, and pathology of the extraocular musculature. The work concludes with sections on general eye health and an alphabetical listing of some simple (i.e., non-compound) pharmaceutical remedies for ophthalmic pathologies.

The popularity of this work is evident in the fact that many copies have survived in manuscript form. It was also translated into Hebrew and into apparently very bad Latin translations, which is likely why this incredibly useful and comprehensive book was not as popular in Europe as some of the other Arabic medical texts already mentioned. Nevertheless, this influential medical treatise remains invaluable as “the oldest Arabic work on ophthalmology that is complete and survives in the original.”⁵⁹⁸

An Arabic edition has been published.⁵⁹⁹ There is not yet any English translation.

IBN ZUHR'S

*AL-TAṢĪR FĪ AL-MUDĀWĀH WA-AL-TADBĪR**("Simplifying Treatments and Diets")*

‘Abd al-Malik ibn (Abū al-‘Alā’) Zuhr ibn ‘Abd al-Malik (d. 557/1161) was born in Seville (modern Spain) to a well-known family of scholars and physicians. To distinguish him from his famous father and grandfather who were also referred to by the family patronymic, Ibn Zuhr, he is commonly referred to Abū Marwān Ibn Zuhr (Latin ‘Abhomeron Avenzoar’). His father, Zuhr ibn ‘Abd al-Malik, was a physician who began training his son at an early age, but was also a litterateur and maintained correspondence with al-Ḥarīri (see #49). He was known for his excellence as a physician, (though not so much for humility) and there is an anecdote that when the famous *Qānūn* (“Canon”) of Ibn Sīnā (see #76) reached him in Andalusia, he disliked it so much that he used it for paper scraps on which to write his prescriptions. Our Ibn Zuhr, the son, had the kind of excellent literary and medical-scientific education that one would expect of a child from such a prestigious family of scholar-scientists: a broad religious, literary, and medical education. It was in the latter that he excelled at an early age and showed great promise. In his adult years, he traveled to the cities of North Africa but there is no indication that he went further East. He served in official positions to rulers of the Almoravid dynasty and, at one point, was imprisoned in Marrakesh (modern Morocco), but with shifting political winds and the rise of

the Almohad dynasty, he served again in official positions such as minister. He developed a personal friendship and professional rivalry with Ibn Rushd (see #72). Ibn Zuhr's medical work had tremendous influence on Ibn Maymūn (see #73),⁶⁰⁰ and is the most frequently quoted source in Ibn Maymūn's *Aphorisms*.⁶⁰¹ Ibn Zuhr died of a malignant ulcer in the year 557/1161 at Seville.⁶⁰²

Ibn Zuhr authored six works of which we know. One was on purgatives, another on kidney pathologies, and a third on vitiligo and pityriasis. None of these have survived. His *Kitāb al-aghdhīyah* ("The Book of Foods") and *Kitāb al-iqtisād fī iṣlāḥ al-anfus wa-al-aṣṣād* ("The Book of Moderation in Rectifying Souls and Bodies") have survived in manuscript form. He is perhaps most famous for his *Taysīr fī al-mudāwāh wa-al-tadbīr* ("Simplifying Treatments and Diets"). Ibn Zuhr was asked to compose it by his friend, Ibn Rushd (see #72), who transcribed the text and who, in his *Kullīyāt*, recommended the *Taysīr* for readers interested in practical therapeutics. It is far from the academic theoretical medical works of Islamic medicine, such as Ibn Rushd's *Kullīyāt* or Ibn Sīnā's *Qānūn* (see #76). As the title indicates, the book itself is a practical guide to applied therapeutics aiming to 'make easy' the treatment of various illnesses and the formulation of appropriate dietary regimens. The work is divided into two parts. After a brief introduction, the work is organized in the (generally) cephalad to caudad presentation that had become typical of therapeutic manuals by the author's time. The first part begins with sections on diseases of the head, which include ophthalmologic and ENT pathologies, as well as some neurologic (such as epilepsy and migraines) and psychiatric pathologies (such as delirium and hypochondriasis). The work then proceeds inferiorly to diseases of the neck, lungs, heart, liver, stomach, and thorax. The second part continues with sections on diseases of the lower abdomen, kidneys, testicles, uterus, and skeletal system, before providing a section on generalized systemic maladies that are not easily categorized to a single organ (pruritus, spasms, arthralgias, myalgias, cancers, etc.). The final section is a treatise on fevers, and the work ends with a formulary.

To be sure, Ibn Zuhr was just as well-versed in the theory of medicine, but his penchant for practical application of medical knowledge allowed for innovative diagnostic methodologies. For example, he was the first physician to identify and document pericardial abscess. He was also one of the first to identify *sarcoptes scabiei* (the mite that causes scabies), and one of the earliest to propose tracheotomies (see also al-Zahrāwī, #75). There is even an anecdote regarding how he cleverly administered a drug to a recalcitrant patient by feeding him grapes that were watered with an admixture of the medicament, taken up by the roots of the grape vine and concentrated in the fruit. While the authenticity of the anecdote is questionable, it reveals the transmitter's perceptions of Ibn Zuhr's ingenuity. It is from the mind of such a physician that the *Taysīr* was formed. This unique work represents an important contribution to practical therapeutics from a physician more interested in experiential applied clinical medicine than the scholarly theoretical medicine so popular with the physician-philosophers.

There are several Arabic language editions of Ibn Zuhr's *Taysīr*,⁶⁰³ as well as a recent French edition,⁶⁰⁴ but not yet any English language translation. An English language scholarly work focusing on the life and times of Ibn Zuhr is also available.⁶⁰⁵

AL-ISRĀ'ĪLĪ'S
KITĀB AL-AGHDHIYAH WA-AL-ADWIYAH

(*"The Book of Foods and Medicines"*)

Ishāq ibn Sulaymān al-Isrā'īlī (d. ca. 330/940, Yitzhak ben Shlomo ha-Yisraeli in Hebrew and Latin 'Isaac Judaeus') was born in Egypt sometime in the mid-3rd/9th century. Very little is known of his early life. Later in life, at about fifty years old, he moved to Qayrawān (modern Tunisia) and was eventually appointed official court physician to the founder of the Fāṭimī dynasty ('Abd Allāh al-Mahdī, r. 297-322 /909-934). He enjoyed great fame during this period, writing many Arabic books and lecturing to large audiences. His philosophy was heavily influenced by al-Kindī (see #68), and his philosophical writings made him eventually the 'father of Jewish Neoplatonism.'⁶⁰⁶ He died in Qayrawān probably around 330/940, although scholars debate the exact date.⁶⁰⁷

He wrote a number of medical works including works on fevers, urine, antidotes, and simple (i.e., non-compound) remedies, as well as works on logic, philosophy, and metaphysics. His *Kitāb al-aghdhiyah wa-al-adwiyah* ("The Book of Foods and Medicines") is "among the most voluminous extant works on this topic."⁶⁰⁸ It covers the medicinal properties of edible plant and animal products and is divided into four parts. The first is composed of introductory sections on the general importance of dietary factors on health and wellness. Then the work proceeds through introductory sections on fruits, pits, seeds, grains, vegetables and herbs, the meat of various animals and their

organs, fowl, edible animal products such as eggs and milk, and both salt-water and freshwater fish. It ends with sections on appropriate consumption and on health maintenance. The second part is comprised of sections on grains (and grain-based foods such as bread and deep-fried sweets), beans, fruits, berries, sugarcane, honey, nuts, olives, and olive products such as gums and oils. The third is comprised of sections on melons, cucumbers, pumpkin, green leafy vegetables, root vegetables, herbs, flowers, spices, and mushrooms. The final portion of the book is comprised of sections on animals of land, sea, and air. This includes not only common domesticated animals and their products, such as cows, goats, sheep, and camels, but also bears, foxes, and hedgehogs, followed by their organs and other body parts, then animal products such as milk, butter, and cheeses, followed by seafood, salt and freshwater fish, crustaceans, snails, and ending with sections on water, wines, other alcoholic beverages, and sugar. The work is based on information from ancient Greek sources such as Galen, Dioscorides, Rufus, as well as from earlier Arabic sources. It represents an early comprehensive collection of information on natural remedies and the therapeutic uses of plant and animal products.

The medical texts of Ishāq al-Isrāʾīlī were translated by Constantine Africanus (d. before 491/1098) into Latin and his philosophical works were translated by Gerard of Cremona (d. 583/1187), among others. While the impact of Ishāq al-Isrāʾīlī's philosophical works in Islamic civilization was limited, they had great influence on Medieval European thinkers such as Thomas Aquinas (d. 672/1274) and Albertus Magnus (d. 679/1280). His medical writings, however, were widely respected in the Islamic world and his *Kitāb al-aghdhīyah wa-al-adwīyah* remains an undeniably significant contribution to classical Islamic medicine.

The *Kitāb al-aghdhīyah wa-al-adwīyah* of Ishāq al-Isrāʾīlī is available in several Arabic editions⁶⁰⁹ but there are not yet any English translations. A chapter from his five-part work on fevers, the *Hummīyāt* ("Fevers"), has been published and is available in English translation.⁶¹⁰ Scholarly studies on his philosophical works have been published, which include English translations.⁶¹¹

IBN AL-BAYṬĀR'S
*AL-JĀMI' LI-MUFRADĀT AL-ADWIYAH WA-AL-
 AGHDHIYAH*

(*"The Comprehensive [Book] on Simple Drugs and Foods"*)

‘Abd Allāh ibn Aḥmad ibn al-Bayṭār (d. 646/1248) was born in Benalmadena, just outside the city of Malaga (modern Spain). He studied botany and collected plants in his native Malaga and other areas in Andalusia. At about the age of twenty-three, he began to travel further afield, crossing the straights of Gibraltar to North Africa and eastward along the southern Mediterranean rim, then to Constantinople (modern Istanbul, Turkey), and to Egypt, where he attained the position of chief herbalist to the Ayyūbī sulṭān al-Kāmil Nāṣir al-Dīn (r. 615-635/1218-1238, Latin Meledin, and nephew of Ṣalāḥ al-Dīn, Latin Saladin). When the sulṭān captured Damascus (modern Syria) three years later, Ibn al-Bayṭār followed him there. In Damascus, one of his students was Ibn Abī Uṣaybi‘ah (d. 668/1270), author of the famous medical biographical dictionary.⁶¹² From there, Ibn al-Bayṭār was able to continue his research and document the flora of Syria, Arabia, and Palestine. He died in the year 646/1248 at Damascus.⁶¹³

He authored several works, including *al-Mughnī fi al-adwiyah al-mufradah* ("The Sufficient [Book] on Simple Drugs"), a pharmacopeia of simple (i.e., non-compound) remedies and the illnesses they treat,

his *al-Durrah al-bahīyah fī manāfi‘ al-abdān al-insānīyah*⁶¹⁴ (“The Brilliant Pearl on That Which Benefits the Human Body”), and a commentary on Dioscorides.⁶¹⁵ He is perhaps best known for his *al-ǧāmi‘ li-mufradāt al-adwīyah wa-al-aghdhīyah* (“The Comprehensive [Book] on Simple Drugs and Foods”). As its title indicates, it is a comprehensive listing of all of the medicinal remedies that the author was able to compile, organized alphabetically. He relied heavily on other sources such as Dioscorides’ *De materia medica*, Ibn Sīnā’s *Qānūn* (see #76), the works of al-Rāzī (see #84), and others. In his introduction, he lists six defining characteristics distinguishing this book from others like it. First is its accuracy in gathered information from sources including Dioscorides and Galen, citation of sources, and the addition of many drugs that previous authors did not mention. Second is the accuracy of the transmitted information. Ibn al-Bayṭār did not simply transmit information from earlier texts, but took pains to verify the information and discarded any earlier reports that were not corroborated by his own systematic identification, empirical observation, and testing. Third, the elimination of duplicated information except where necessary for the reader. Fourth, the organization of the information alphabetically for ease of reference. Fifth, bringing to the reader’s attention any drugs about which there is misinformation due to other authors who simply copied what they saw in earlier books; this book instead provides the reader with accurate information corroborated by empirical observation and experimentation. Sixth, he has included the names of the drugs in various languages. Importantly, he comments that he has added textual clarification of short vowels and diacritics to preserve accurate pronunciation in reading the text and to preserve accurate transmission of the text by copyists and scribes.

In addition to documenting approximately 1,000 medicaments already familiar to the ancient world, Ibn al-Bayṭār’s compilation contains approximately four hundred additional remedies used by physicians and pharmacists in Islamic civilization that were unknown to the physicians and botanists of antiquity. Ibn al-Bayṭār’s systematic, empirical observation in testing these drugs also marks the beginnings of an increasingly scientific approach that transitioned away

from ancient and medieval practices and moved closer toward modern pharmacology. All of these factors make this work indispensable in the understanding of the history of pharmacy and pharmacology specifically, as well as of medicine and botany more generally.

Several Arabic editions of Ibn al-Bayṭār's *al-Ǧāmi' li-mufradāt* have been published,⁶¹⁶ but there is not yet an English translation. A Spanish language edition of the *Ǧāmi' li-mufradāt* is available for the entries under the letters *ṣād* and *ḍād*⁶¹⁷ and there is also a scholarly work on Ibn al-Bayṭār in Spanish.⁶¹⁸

IBN AL-‘AWWĀM’S
KITĀB AL-FILĀḤAH

(“*The Book of Agriculture*”)

Yahyá ibn Muḥammad ibn Aḥmad al-Ishbīlī, known as Ibn al-‘Awwām, is a figure about whom we know very little other than what is available in the book for which he is famous. We know neither when nor where he was born nor died. From his *nisbah*, al-Ishbīlī, we know that he was either born or lived (or both) in or near Seville (modern Spain). All we know with certainty is that he was active in the latter half of the 6th/12th century. It seems from his work that he was a well-educated and wealthy agricultural landowner.⁶¹⁹ He was apparently well-read in the botanical and agricultural literature available to him in Andalusia. However, it appears that he was not merely a member of the aristocratic landed gentry. Unlike most wealthy landowners, Ibn al-‘Awwām seems to have had first-hand knowledge from ‘getting his hands dirty’ by actively planting, fertilizing, watering, pruning, and harvesting his own crops. The year 580/1184 is one date postulated for his death.⁶²⁰

He is known for his encyclopedic agricultural work, *Kitāb al-filāḥah* (“The Book of Agriculture”). It is a vast compilation of nearly all knowledge available to the author on matters of planting, cultivation, care, harvesting, and even preservation, of all manner of agricultural products, from fruits and vegetables, to nuts, herbs and flowers, as well as honey, dairy, and eggs. It also covers poultry and

mammalian animal husbandry. Ibn al-‘Awwām includes citations of over one hundred earlier authors on this subject, integrating his own experience and contemporaneous literature with the literature of the ancient world, including Greece and Babylon. He includes many references to Arabic translations of the surviving remnants of the works of Cassianus Bassus (Scholasticus, ca. 1st/7th century) in the *Geoponica*⁶²¹ (“Agricultural Activities”) as well as references to Ibn Waḥshīyah’s (ca. 3rd/9th century) Arabic translation of *al-Filāḥah al-nabaṭīyah*⁶²² (“Nabatean Agriculture”). Ibn al-‘Awwām’s work consists of thirty-four detailed chapters (comprising six volumes of text and a seventh of indices in the modern printed edition). The first four chapters deal with various types of earth, types and methods of fertilization, irrigation techniques, and the planting of gardens. Chapters five through seventeen deal with the planting of trees and the maintenance of orchards, the varieties of trees of Andalusia, the preparation, planting, fertilization, and irrigation of orchards, as well as cautions for which trees work well planted together and which types of trees are best kept separate. There are also chapters on the identification, diagnosis, and treatment of diseased plants, on coring, pitting, de-seeding, and preserving harvested produce. The next twelve chapters (eighteen through thirty) cover the planting of seeds, both in the context of personal gardening and for large-scale agriculture, of beans and other vegetables, root vegetables, aromatics and herbs, cotton and other fibrous plants for textiles, and plants grown specifically for the harvesting of their seeds. The thirtieth chapter is on structures and apparatus built for the manufacture of such products as rosewater, wine, and vinegar. The last four chapters are on animal husbandry, beasts of burden, poultry, and ending with a chapter on veterinary medicine. This comprehensive and detailed Arabic agricultural encyclopedia was so valuable in promoting land management and increasing property values that Spanish governments after the *Reconquista* encouraged its translation for the education of local farmers.⁶²³

Ibn al-‘Awwām’s *al-Filāḥah* is both a product of and a contributor to the agricultural revolution⁶²⁴ experienced by the Old World with

the rise of Islamic civilization. Just as the Mediterranean basin experienced similar transformations in earlier centuries under smaller empires, Islamic civilization's unification of vast territories under a single civilizational matrix facilitated the passage of knowledge, consumer goods, and agricultural products across territories from the Atlantic shores of Europe and Africa to the borders of China. And just as we have already seen with the immense contributions of the philosophers and physicians of Islamic Civilization towards laying the foundation for the intellectual rise of Europe, so too in the cultivation and production of modern agriculture, luminaries such as Ibn al-ʿAwwām planted the seeds, both literally and figuratively, for a new era in human civilization.

Ibn al-ʿAwwām's complete *al-Filāḥah* is available in a seven-volume Arabic edition.⁶²⁵ No complete English translation is yet available, but selected portions have been translated and published.⁶²⁶ There is also a Spanish edition published with the original Arabic text,⁶²⁷ as well as several French editions.⁶²⁸

IBN HUDHAYL'S
HILYAT AL-FURSĀN

(*“The Ornament of the Cavalry”*)

‘Alī ibn ‘Abd al-Raḥmān al-Fazārī, known as Ibn Hudhayl, was an Andalusian gentleman active in the 8th/14th century about whom we know very little else. He authored a veterinary work, *al-Fawā'id al-musattarah fi 'ilm al-baytarah*⁶²⁹ (“The Documented Benefits in the Knowledge of Veterinary Medicine”) as well as some other minor works.⁶³⁰ More importantly, he was involved with the royal court at Granada (modern Spain) and it was at the request of the sultān Muḥammad V (r. 755/1354 and again in 763/1362) that he wrote his magnum opus, the *Tuḥfat al-anfus wa-shi'ar sukkān al-andalus* (“The [Rare] Gift of the Souls and the [Distinguishing] Emblem of the People of Andalusia”), essentially an attempt to foster a drive towards military and cavalry arts. The book was not tremendously popular among his comfortably complacent fellow Granadans. Two royal generations later, as the threat of invading Christian armies became more menacing, Muḥammad VII (r. 794-810/1392-1408) asked Ibn Hudhayl to compose a new work. His *Hilyat al-fursān wa-shi'ar al-shuj'ān* (“The Ornament of the Cavalry and the [Distinguishing] Emblem of the Brave”) is essentially a condensed version of the original *Tuḥfat al-anfus*. It contains twenty chapters, beginning with an introductory chapter on God’s creation of, man’s domestication of, and the global spread of, the horse genus. The next

seven chapters are on the virtues of the horse, on interacting with and caring for horses, on Arab nomenclature for equine anatomy, preferred anatomical characteristics, on coloration, blazes, and other markings, on noble horses, their characteristics, names, and bloodlines, and on both innate and acquired faults of horses. The next six chapters deal with choosing and testing horses, learning various styles of riding, races and competitions in the ring, names of the Prophet Muḥammad's horses and other famous Arabian stallions, hippological terminology, and citations of poetic verses on the horse. The last six chapters deal with military arts on horseback, with one chapter each on the use of swords, spears, bow and arrow, breastplates, shields, and other assorted armaments. Along with other contemporaneous works on the subject, this work of Ibn Hudhayl marks the peak of hippology and hippiatry in Islamic civilization.⁶³¹

As with so many other disciplines we have mentioned in this list, the expansion of Islamic civilization into new territories led to the melding of earlier traditions to create something never before witnessed in human history. So too did earlier Greek, Persian, and Turkic cavalry traditions combine with those of Arabia to form a distinct new tradition of equestrian arts. The earliest extant Arabic treatise on horses, *al-Furūsiyyah wa-shiyāt al-khayl*⁶³² ("Cavalry and Horsemanship") was written by Abū Yūsuf Ya'qūb ibn Akhī Ḥizām (active in the 3rd/9th century), stablemaster of the 'Abbāsī caliphs al-Mu'taṣim (r. 198-227/833-842) and al-Mu'taḍid (r. 279-289/892-902). He also authored a veterinary work, *Kāmil al-ṣinā'atayn al-bayṭarah wa-al-zardaqah* ("The Complete [Work] of Two Arts: Veterinary Medicine and Training Horses"), but this title is often also attributed to the work of a later writer, Ibn al-Mundhir (active in the late 7th/13th century).⁶³³ Ibn al-Mundhir was stablemaster and chief veterinary surgeon to the Mamlūk sultān al-Nāṣir (r. 693/1294, 698-708/1299-1309, and again in 709-741/1310-1341). He wrote the *Kāshif hamm al-wayl fī ma'rīfat amrād al-khayl*⁶³⁴ ("The Removal of Anxious Distress In the Understanding of Illnesses of Horses"), also simply known as *Kūtāb al-Nāṣirī*

(“The Book of [Sultān] Nāṣir”), which compiles information from earlier sources such as Ibn Akhī Ḥizām’s original *Kāmūl al-ṣinā‘atayn*.

Other important related works that have been published include Sāhib Tāj al-Dīn’s (d.707/1307) *Kitāb al-bayṭarah*⁶³⁵ (“The Book of Veterinary Medicine”) and two works by Muḥammad ibn Ya‘qūb al-Khuttālī: the *‘Awn al-jihād min al-umarā’ wa-al-ajnād*⁶³⁶ (“Help in the Struggle for Princes and Armies”) and the *Munyat al-ghuzāt*⁶³⁷ (“Wish of the Warriors,” a ‘Chivalric Arts’ manual). The amalgam of ancient techniques and the fluorescence of the new Islamic equestrian tradition continued until its peak in 6th-7th/12th-13th century Egypt and Andalusia,⁶³⁸ where sporting and martial competitions hosted in hippodromes were grand affairs during which *furūṣīyah* (knighthood, horsemanship) was practiced and displayed. An examination of this literature and comparison with contemporaneous European traditions leaves little doubt that the culture of Islamic *furūṣīyah* played a role in influencing the development of notions of knighthood and chivalry in medieval Europe. The sophistication of the equestrian arts throughout Islamic civilization had a significant and lasting impact on medieval Europe that endures even in international equestrian culture to this day.

Ibn Hudhayl’s original *Tuhfat al-anfus* is available in a modern Arabic edition⁶³⁹ as well as an older facsimile manuscript edition in classical Maghribī script.⁶⁴⁰ There is, unfortunately, no English translation, but a French translation of this manuscript, with scholarly notes, is available.⁶⁴¹ In addition, there are two modern Arabic editions of the *Ḥilyat al-fursān*⁶⁴² as well as a French translation by the same translator of the *Tuhfat* manuscript.⁶⁴³ The chivalric arts manual of al-Khuttālī, *Munyat al-ghuzāt*, has been published with an English translation.⁶⁴⁴ Also available is an excellent English language scholarly work on the veterinary practices of the Mamlūks.⁶⁴⁵

JĀBIR IBN ḤAYYĀN'S
HAKK AL-ASTĀR

(*“Uncovering the Veil”*)

Abū Mūsá (or Abū ‘Abd Allāh) Jābir ibn Hayyān al-Azdī (d. ca. 199/815, Latin ‘Geber’) was the son of a druggist in Kūfah (modern Iraq) who was sent eastward as a pro-‘Abbāsī revolutionary spy. Jābir was born in Ṭūs (near Mashhad, modern Iran) around 103/722. After his father was caught by the authorities and brutally killed, Jābir went to Medinah (modern Saudi Arabia), and took for his teacher Ja‘far al-Šādiq (the sixth Shī‘ī Imām, and one of the teachers of Mālik ibn Anas, see #10). Later, as a result of his father’s support during the revolution, the ‘Abbāsī caliph Hārūn al-Rashīd (r. 170-193/786-809) favored Jābir at the caliphal court and he was close with the powerful Barmakī family who served as ministers to the caliph. When political fortunes shifted, the family with whom he was so closely associated fell from grace and Jābir was sentenced to spend the rest of his life under house arrest. He died in his home in Kūfah around 199/815.⁶⁴⁶ How much of his biography is fact and how much is legend is not entirely clear.⁶⁴⁷

There are, without exaggeration, thousands of treatises and articles attributed to Jābir. Among the most significant are several important collections: the ‘One Hundred and Twelve Books’ are alchemical essays referencing Greek alchemists such as Hermes and

Democritus, the ‘Seventy Books’ are Jābir’s own alchemical teachings, the ‘One Hundred and Forty Four Books,’ also known as the ‘Books of Balances’ are on the philosophical basis of alchemy, and the ‘Five Hundred Books’ examine philosophical issues in greater detail. In addition, there are many other smaller collections and individual treatises on such diverse subjects as religion, philosophy, astrology, magic, mathematics, music, medicine, and other subjects. It has been noted that “this vast body of literature, which comprises all the sciences of the ancients which passed to Islam, cannot be the work of a single author nor can it date back to the second half of the 2nd/8th century.”⁶⁴⁸ In fact, there are some who theorize that no such person as Jābir ever existed at all. Such theories are not a product of modern scholarship. Ibn al-Nadīm (see #57) mentions that some of his contemporaries in the 4th/10th century doubted the existence of an actual Jābir ibn Ḥayyān, though Ibn al-Nadīm himself disputes their claims.⁶⁴⁹ The above biography may be accurate, or the very existence of Jābir could be a complete fabrication, or the truth may lie somewhere in between the two extremes. It is possible that a Jābir did exist, who may have composed one or more of the works attributed to him, with the remaining thousands having been composed pseudonymously in subsequent decades and centuries by those influenced or inspired by the original works. This seems to have been the case at least for the famous later European alchemical treatise known as *Summa perfectionis magisterii* (“The Height of the Perfection of Mastery”). It and others like it are supposedly Latin translations of the work of Jābir, but for which no Arabic originals can be found, leading some scholars to attribute these works to a European Pseudo-Geber.

Regardless of the authenticity of the attribution of individual texts, there is a relative thematic consistency in the works themselves that permits use of the label ‘Jāberian’ for the corpus as a whole. The main problem in examining the contributions of this corpus, and its associated school of thought, to modern chemistry, and one of the main reasons for modern chemists’ use of the term ‘alchemy’ in the pejorative, is the fact that it is so permeated with philosophy. The

notions we moderns commonly associate with alchemy are those of transmutation of lesser metals into gold through magical substances such as the ‘philosopher’s stone’ or the ‘elixir of life.’ These were certainly integral to medieval alchemy, but we should note that this was the result of a marriage between neo-Platonic philosophical theory and physical experimentation. Based on the *Physics* of Aristotle, its commentaries, and the writings of Plato, Euclid, Archimedes, and others, “no alchemical work of Islam reveals such a vast knowledge of ancient literature or has such an encyclopaedic character as the writings of Jābir.”⁶⁵⁰ The influence of Christian Gnosticism is also evident in analogies to creation, rebirth, and resurrection. Moreover, the entire corpus, already deeply infused with philosophical concepts, is written in a style making liberal use of allegory and symbolism (the egg is a common example) and in a language using deliberately obfuscating terminology aimed at concealing ‘hidden’ meanings from outsiders.

But, unlike the alchemy of the ancients, “the alchemy of Jābir is an *experimental science* based on a philosophical theory.”⁶⁵¹ It represents an advancement from ancient elemental theories. For example, in the Aristotelian view, there are four elements: fire, air, water, and earth, and it is from seepage of aspects of these elements deep into the Earth that metal is formed. The Jāberian view discredits this and claims that metals are formed from Sulfur and Mercury, with different metals resulting from varying proportions of this combination and from varying purities of starting materials, Gold being the ‘perfect’ proportion of 100% pure ingredients.⁶⁵² While a modern chemist might see Jābir’s view as equally ridiculous as Aristotle’s, one would do well to recall that the history of science is one of incremental advances. Concepts as fundamental to our modern understanding of chemistry as ‘oxidation’ are the result of a continuum from Aristotle’s elemental theory, to Jābir’s theory of metals, to Stahl’s Phlogiston, to Lavoisier’s Caloric, each of which we now find laughable, but each of which contributed to the step-wise advance toward our current understanding of the concept. The modern chemist would also do well to realize that our descendants on the

other end of this continuum 1,000 years in the future will likely look back at our ‘modern’ science of today with similar ridicule. Once one achieves this understanding and is able to view more objectively the contributions of the Jābirian corpus, it is not difficult to appreciate the fact that Jābir “more clearly recognized and stated the importance of experiment than any other early chemist, and made noteworthy advance in both the theory and practice of chemistry.”⁶⁵³

The *Hakk al-astār*⁶⁵⁴ (“Uncovering the Veil”) is a very small treatise that is essentially a recipe for silvering. It is not on transmutation into silver, but on overlaying a copper or iron product with a silvery coating (likely an arsenide) and represents essentially the medieval version of our modern silver-plating techniques. The process requires nine hundred distillations and is a good example of the extent to which these practitioners experimented with their materials and methods before finding a successful combination. It is also an excellent example of the practical applications of medieval proto-chemistry as opposed to the esoteric philosophical tracts more commonly associated with alchemy. The influence of the Jābirian corpus on the history of chemistry is undeniable, as its principles reigned for centuries throughout the medieval era and the name Geber was so well-known throughout Europe that it was used to lend credibility to European compositions on the subject.

This short treatise is available both in its original Arabic and in English translation.⁶⁵⁵ There is also a scholarly English translation of the *Summa perfectionis magisterii*⁶⁵⁶ of Pseudo-Geber as well as an older English translation under the title “Works of Geber.”⁶⁵⁷

IBN ZAKARĪYĀ AL-RĀZĪ'S
KITĀB AL-ASRĀR

(*"The Book of Secrets"*)

Muḥammad ibn Zakarīyā al-Rāzī (d. 313/925 or 323/935, Latin 'Rhazes') was born in Rayy (modern Iran). In spite of the incredibly important role he played later in life, we do not know much about his early education. It is clear that he was educated in the Greek sciences. He appears to have been an insatiable scholar, reporting in his own self-description that, since his youth, he was never able to come across a new book or meet a new person without mastering the book and learning all he could from that person.⁶⁵⁸ He showed an early affinity for music, both in theoretical study and in actual practice, having become noted for his playing of the lute and for voice. Among his compilations is a musical encyclopedia, *Fī jamāl al-mūsīqī* ("On the Beauty of Music"). He also composed works on philosophy, in which he disagreed with some of the neo-Platonic positions of other Islamic philosophers such as al-Fārābī (see #69), Ibn Sīnā (see #70), and Ibn Rushd (see #72), and he was roundly criticized by others, in turn.⁶⁵⁹ He showed great interest and skill in alchemy and a likely familiarity with the translated Greek works of Democritus probably played a role in shaping his own atomistic philosophy.

At some point, al-Rāzī travelled to Baghdad, where he became interested in medicine, excelled in his studies, and acquired a position

at the local hospital. His reputation in medicine preceded him, resulting in an invitation by the governor of his hometown of Rayy to lead the hospital there. The invitation was accepted by al-Rāzī and he composed and dedicated several medical works to this patron.⁶⁶⁰ His fame as a physician spread and he was invited back to Baghdad to head a new hospital founded by the caliph al-Mu‘taḍid (r. 279-289/892-902) and later, during the reign of his son al-Muktafi (r. 289-295/902-908), to build the largest hospital in the caliphate. Throughout his life, al-Rāzī attracted many students. There are over two hundred works attributed to him, among them works in which he documents advances and discoveries in science and medicine. Toward the end of his life, he returned to his hometown of Rayy. His vision began to fade and he suffered from some paralysis. Even in his old age, and even when he lost his sight completely, he continued his scholarly activities by having new books read to him and he continued to compose new material through the assistance of scribes. He died in either 313/925 or 323/935 at Rayy.⁶⁶¹

A great many works are attributed to al-Rāzī, including many medical works.⁶⁶² Among the most famous is his *al-Hāwī*⁶⁶³ (“The Comprehensive [Book]”), which is actually a collection of his medical notes from his life-long studies as a physician, compiled posthumously by his students. He also composed important works differentiating between various diseases with similar manifestations⁶⁶⁴ and he was the first physician to document the differentiation between smallpox and measles. Several other important works include his *Ṭabīb li-man lā ṭabīb lahu*⁶⁶⁵ (“The Physician for One Who Has No Physician”), which, among an abundance of other historical evidence, highlights one of his most exemplary qualities: his compassion for the poor. He was also the father of pediatrics. His *Kūtāb tadbīr al-ṣibyān*,⁶⁶⁶ (“The Book on the Care of Children”) is the first work ever written on pediatric medicine and “all the early pediatric textbooks like those of Bagellardus, Victorius, Phaer, Mercurialis, and Pemell, from the tenth [sic] century to the 17th, were guided by the Latin editions of Rhazes.”⁶⁶⁷

In general, al-Rāzī is much more clinically oriented in his approach to medicine than are other more theoretically oriented

physicians such as Ibn Sīnā (see #76). His writings also evidence a level of independent thinking rare among both contemporaries and predecessors. This is perhaps best embodied by his *Shukūk ‘alā Jālānūs*⁶⁶⁸ (“Doubts on Galen”), in which he challenges the theoretical basis of Galen’s humoral theory of medicine, toppling centuries of established dogma in which Galen was viewed as the unquestionable medical authority in Islamic civilization. His penchant for independent thinking also made him many enemies, particularly among religious conservatives, who used some of his writings, such as his *Fī ḥiyāl al-mutanabbīn* (“On the Tricks of False Prophets”) to question his religiosity. Such accusations bear little weight in light of the general attitudes expressed in most of his writings, especially in works dealing specifically with religion, such as his *Fī wujūb da‘wat al-nabī ‘alā man nakira bi-al-nubuwwah* (“On the Obligation to Propagate the Teachings of the Prophet Against Those Who Deny Prophecy”). Unfortunately, none of his works on religion have survived in their entirety.

Just as with his enormous contributions to medicine, al-Rāzī’s empirical approach played an important role in advancing the transition from medieval alchemy to modern chemistry. While he defended transmutation against its opponents such as al-Kindī (see #68), Ibn Sīnā (see #70), and Ibn Khaldūn (see #67), his position on the matter was likely little more than an extended defense of his philosophical positions. He wrote over a dozen alchemical works in which he utterly dismissed ideas commonly associated with alchemy, such as magic and potions, further proving that his position on transmutation was only a philosophical one. He conducted experiments and procedures with an emphasis on empirical observations. From such rigorous experimentation, he was able to describe more demonstrable qualities of chemical reactants and products than the traditional Aristotelian elemental theory that prevailed for centuries prior. Among his most important alchemical works is his *Kitāb al-asrār* (“The Book of Secrets”). This was followed by the *Sirr al-asrār* (“Secret of Secrets”), which incorporated his earlier writings. The book is a study of therapeutically useful ingredients with applications in medicine and pharmacy, detailing their colors, qualities, and other characteristics. Notable in al-Rāzī’s work is his logical and systematic

classification of chemical substances. He also includes a section detailing information about laboratory equipment and the specific design and uses of each apparatus in the extraction and preparation of chemical substances. A third section provides detailed instructions for such procedures as calcination of metals such as gold, silver, copper, iron, lead, and others; for waxing and coating substances; and procedures for sublimation, extraction, and distillation, including the distillation of petroleum (*naphtha*). Also included are procedures for dyeing stone, including coloration of precious stones. Procedures are listed for gilding and silvering of metals to provide lustrous coatings. There are no procedures for transmutation. Neither are the gilding and silvering techniques or the techniques for dyeing precious stones presented as nefarious endeavors. They are procedures that one would expect in a technologically advanced medieval artisan's workshop and served as the medieval equivalent of what we would today call 'industrial chemistry.' The work is a systematic, logical presentation of the most important foundational chemical techniques of early chemistry, divorced of the magic and superstition of ancient alchemy and focused instead on empirical results with practical applications in pharmacy, medicine, jewelry, arts, and crafts. It should come as no surprise that the critical thinker to whom Sarton refers in his *History of Science* as "the greatest clinician of Islam and the Medieval Ages"⁶⁶⁹ would produce this indispensable text in the historical transition from ancient alchemy to modern chemistry.

There is a published edition of al-Rāzī's *Kūtāb al-asrār*⁶⁷⁰ in the original Arabic but there is not yet an English translation. His historically important treatise on the differentiation between smallpox and measles has been translated into English.⁶⁷¹ Others among his medical works that are available in English translation are an important ethical treatise, *al-Ṭibb al-rūhānī*⁶⁷² ("Spiritual Medicine"), his *Kūtāb al-abdāl*⁶⁷³ ("The Book of Substitutes"), on substitute medications, and his treatise on pediatrics, the *Tadbīr al-ṣibyān*.⁶⁷⁴ An important selection of his clinical cases has also been translated into English.⁶⁷⁵

IBN AL-HAYTHAM'S
KITĀB AL-MANĀẒIR

(*"The Book of Optics"*)

Commonly known as Ibn al-Haytham (Latin Alhazen), al-Ḥasan ibn al-Ḥasan ibn al-Haytham (d. 430/1039) was born in Baṣrah (modern Iraq). We know little else of his early life but that he excelled in mathematics and physics and distinguished himself as a scientist with a solid grasp of the Greek classics. His renown in applied mathematics spread far and wide. The sixth Fāṭimī caliph (and sixteenth Ismāʿīlī Imām) al-Ḥākim (r. 386-411/996-1021) invited Ibn al-Haytham to Egypt to devise a method of regulating the annual flooding of the Nile River. Once there, Ibn al-Haytham conceded that the task was too daunting and abandoned the project. Fearing the caliph's wrath, he escaped Egypt and did not return until after the caliph's death. He then returned to Cairo and focused on scientific scholarly work until his own death in 430/1039.⁶⁷⁶

He authored over a hundred works on mathematics, physics, and other disciplines. Among the most important are his *Maqālah fī daw' al-qamar* ("Treatise on the Light of the Moon"), his *Fī al-makān wa-al-zamān* ("On Space and Time"), and his *Maqālah fī hay'at al-ʿālam* ("Treatise on the Structure of the Universe"), which had a tremendous influence on later authors such as Ibn Rushd (see #72). Among his other works published in Arabic are one on the source of the light of the stars,⁶⁷⁷ and his criticism of, and commentary on,

Euclid's *Optics*.⁶⁷⁸ But perhaps his most important work is his *Kitāb al-manāẓir* ("The Book of Optics"). It is a composition that is divided into seven books total. The first is on general vision and discusses the properties of light, the structure of the eye, and related matters. The second is on visual perception of particular properties such as color, shape, distance, and position. The third is on errors in vision and their causes. The fourth and fifth books are on the results of his experiments on reflection. The sixth book is on errors in visual perception related to reflection. The seventh and final book is on refraction. Among Ibn al-Haytham's most important foundational contributions to the scientific study of optics in the centuries that followed is his reversal of centuries of traditional dogma theorized by the Greek masters such as Ptolemy, who believed that visual rays emanated from the eye to the objects seen. Ibn al-Haytham proved through experimentation that the reverse was true: light from the objects we see enters our eyes from the outside world. He also concluded that the speed of light was not infinite, as centuries of dogma maintained, but that it travelled at finite but extremely high speed. Perhaps most importantly, Ibn al-Haytham emphasized rigorous experimentation, meticulous documentation, and basing conclusions only on reproducible results. These are all characteristics that set Ibn al-Haytham's methodology apart from his predecessors. Incidentally, they are among the most fundamental principles of what we now call the 'scientific method.' Indeed, his greatest achievement may have been his success in accomplishing the "herculean task of disentangling the science of optics from its subjective Greek web, and of thoroughly re-organizing its methods and theoretical foundations."⁶⁷⁹ Ibn al-Haytham's *Kitāb al-manāẓir* was translated into Latin as *Opticae Thesaurus* and also as *De Aspectibus* and became tremendously influential in European science. Its role in the history of science is difficult to overstate: "hardly any other Arabic scientific works [sic.] has influenced European scientific research more than this: it became the basic work for Roger Bacon, Leonardo da Vinci, and Johann Kepler."⁶⁸⁰

Our modern world owes much to this remarkable scientific luminary. For Ibn al-Haytham's work on optics alone, anyone who has ever benefited from corrective eyewear, or from a discovery made by a microscope or telescope, or from a camera or smartphone or satellite, is deeply in his debt. He also calculated the height of the Earth's atmosphere, explained (as Posidonius did before him) the reason why the sun and moon appear larger near the horizon, determined that the Milky Way was a distant phenomenon outside of the Earth's atmosphere, and resolved a mathematical problem (now named 'Alhazen's problem') that Leonardo da Vinci (d. 1519) later attempted but could not solve mathematically (only mechanically) and that Huygens (d. 1695) later solved more simply.⁶⁸¹ He also "proved a result that is now known as Wilson's theorem"⁶⁸² seven centuries before John Wilson (d. 1793). Objective historians of science with a familiarity with Ibn al-Haytham's work have observed that he is "the true founder of physics in the modern sense of the word."⁶⁸³ Some scientists even note that he had "already considered many of the topics that most of us are working on now—and arrogantly consider as 'modern questions'—a millennium ago."⁶⁸⁴ Sadly, in spite of all these well-documented achievements, much of his work remains ignored by today's scientific community and many of his discoveries remain misattributed to later European scientists. It is hoped that such widespread errors in the history of science will be corrected by a new generation of truly objective scientists and scholars who reject obtuse regurgitation of established dogma in the history of science and instead objectively credit Ibn al-Haytham for his thousand-year-old writings in which he "clearly enunciated many of the fundamental principles which are credited to scientists living in the last two hundred years."⁶⁸⁵

Several editions of Ibn al-Haytham's *Kūṭāb al-manāẓir* are available, one series of which includes a critical edition of the original Arabic along with an English translation,⁶⁸⁶ and another that is based on the Latin *De Aspectibus*, also with an English translation.⁶⁸⁷ His *Maqālah fī ḥay'at al-'ālam* is also available in English translation,⁶⁸⁸ as is his work on the completion of Greek conics.⁶⁸⁹

AL-KHĀZINĪ'S
MĪẒĀN AL-ḤIKMAH

(*"The Balance of Wisdom"*)

‘Abd al-Raḥmān al-Khāzinī (d. after 524/1130) was a young Greek slave of the court treasurer at Marv (just southeast of Mary, in modern Turkmenistan), historically the capital of Khurāsān province and an important site along the Central Asian silk road. His influential patron ensured that the boy received an excellent classical education. He appears to have excelled in mathematics and natural philosophy. We know very little of his personal life other than reports of his humility. There are anecdotes of his refusing offerings of great wealth, responding that he needed for his expenses only a small fraction of the gold pieces provided. His talent and his personality did not go unnoticed. He was favored at the court of the Saljūq sultān Sanjār (ruled Khurasān from 490/1097, then reigned as sultān from 511/1117 until his death in 552/1157). During most of his reign, the city of Marv served as the eastern capital of the Saljūq Empire and his court patronized great literati and scientists (such as ‘Umar al-Khayyām, who was likely one of al-Khāzinī’s teachers in mathematics and astronomy, see # 94). At Marv, al-Khāzinī’s scientific prowess shone, and today he is known as one of the great astronomers whose work was based on his own astronomical observations rather than theoretical study alone. As with

his birth, the precise place and date of his death are unknown, but we know that he was active until at least 524/1130, when he dedicated his *Ẓij* (see below).⁶⁹⁰

Several works are known to have been composed by al-Khāzinī, including *al-Ẓij al-Sanjārī al-Sultānī* (“The Astronomical Tables of Sulṭān Sanjār”). It was noted for its high level of accuracy and was even translated into Greek and studied in the Byzantine empire.⁶⁹¹ Another of his works is his *Risālah fī al-ālāt* (“Treatise on Instruments”) in which seven astronomical instruments (such as the triquetrum, quadrant, and astrolabe) are described along with instructions for their use in astronomical observation. He is perhaps best known for his *Mīzān al-ḥikmah* (“The Balance of Wisdom”). It is a book on the physics of fluid mechanics and, specifically, hydrostatics. It deals with the theoretical underpinnings related to an actual hydrostatic scale (balance) that he designed for the sulṭān’s treasury. This scale allowed treasury officials to make precise measurements and helped to authenticate substances such as precious metals and precious stones by weight. The theoretical bases of the work include classical Greek sources such as those of Archimedes and Euclid, among others, as well as earlier Muslim sources such as those of ‘Umar al-Khayyām, Ibn al-Haytham (see previous, #85), and al-Bīrūnī (see #99), among others. After a brief introductory section discussing the usefulness of the book, how the reader can best benefit from it, the basic principles it covers, and an explanation of how the material has been divided, the work itself is composed of eight sections. The first covers the relevant theories of the author’s predecessors, including sections on Ibn al-Haytham, Archimedes, Euclid, Menelaus, and others. The second is on weights and measurements. The third is on observed and relative weights and measures of precious metals and gems, with al-Bīrūnī cited as a source. The fourth is on hydrostatics and contains chapters on the work of Archimedes, Menelaus, al-Rāzī (see #84) and ‘Umar al-Khayyām, among others. The fifth section covers the design of al-Khāzinī’s hydrostatic balance, its structure, and instructions on how to build, calibrate, and test it. The sixth is on how to use the balance

to differentiate between various metal substances, as well as between a variety of precious stones. The seventh is on the use of the balance in the treasury for measurement of gold and silver coins, precious stones, and precious metals. The final section is on using hydrostatics for timekeeping (water-clock) and the measurement of hours and fractions thereof. The book contains relevant explanatory diagrams throughout. Also interwoven throughout is the concept of balance, not only in the physical sense, but also in the sense of the scales of divine justice. Three centuries before Simon Stevin's (active 16th century) publication of *De Beghinselen der Weeghconst* ("The Principles of Weighing") in 1586, al-Khāzinī's *Mīzān al-ḥikmah* was "a remarkable memorandum on science being rooted in all-encompassing divine justice."⁶⁹²

While the work of al-Khāzinī was relatively well-known throughout the Muslim world, aside from his astronomical tables, his work does not seem to have achieved in Europe the recognition that it deserves. This amazing young scientist recognized fairly accurately the force of the Earth's gravity, centers of gravity of objects on its surface, described the relationship between temperature, weight, and atmospheric density, and provided relatively accurate determinations of specific gravities, all as a result of experimental and empirical observations. Modern historians of science have noted that careful study of his work "can leave no doubt that as a maker of scientific instruments he is among the greatest of any time."⁶⁹³

The *Mīzān al-ḥikmah* is available in the Arabic original.⁶⁹⁴ While there is not yet a complete English translation, some excerpts are available in English.⁶⁹⁵ There is also an early analysis of the tremendous value of this text.⁶⁹⁶

AL-JAZARĪ'S
KITĀB AL-ḤIYAL AL-HANDASĪYAH

(*"The Book of Ingenious [Mechanical] Devices"*)

Ismā'īl ibn al-Razzāz al-Jazarī (d. 602/1206) is a figure about whom we know very little other than the information we are able to gather from the singular work for which he is best known. From his name, we can gather that his father was a rice dealer (*razzāz*), and that he was born in and/or spent most of his life in the *jazīrah* area (upper Mesopotamia) of the Fertile Crescent at the foothills of the mountain ranges that extend from what is now Iraq into the Anatolian plateau and to the Mediterranean coast. We know, by his own statements in his book, that he was in service to the Artuqī dynasty for at least a quarter century and that he composed his work at the behest of his patron, Nāsir al-Dīn Maḥmūd (r. 596-618/1200-1222), Artuqī prince at the court at Āmid (modern Diyarbakr, Turkey). It was at Āmid that al-Jazarī died in 602/1206, shortly after he finished his book.⁶⁹⁷

His *Kitāb fī ma'rifat ḥiyal al-handasīyah* ("The Book of Ingenious [Mechanical] Devices") is also sometimes commonly entitled *al-ḡāmi' bayn al-'ilm wa-al-'amal al-nāfi' fī ṣinā'at al-ḥiyal* ("The [Book] Combining Theory and Practice That Is Beneficial to the Construction of Ingenious [Mechanical] Devices"). As the titles indicate, the work is one of mechanical engineering and details the construction of various mechanical devices. The author cites earlier sources, which include

early Greek sources such as the work of Apollonius as well as previous Arabic works in this genre such as the *Kiṭāb al-hiyāl* (“The Book of [Mechanical] Devices”) of the Banū Mūsā brothers (active 3rd/9th century).⁶⁹⁸ This work by al-Jazarī represents “a tradition of mechanical engineering in the Eastern Mediterranean and the Middle East from Hellenistic times up to the 7th/13th century.”⁶⁹⁹ However, al-Jazarī’s work does not simply transmit earlier information. Rather, he improves on the tradition of his predecessors, including very detailed diagrams and step-by-step instructions describing the manufacture, assembly, calibration, and testing of the devices. It also includes the first known example of a double-action piston pump known to have had true suction pipes. The book describes fifty mechanical devices and is divided into six sections. The first four each contain ten subsections and cover the construction of clocks, carousels, specialized containers and vessels, and several types of fountains and automated wind instruments. The fifth and sixth sections contain five subsections each, with the fifth section covering different mechanisms that raise water from lower to higher elevations and the sixth and final section covering assorted constructions that do not fit into any of the previously mentioned categories. Unlike so many other Arabic scientific works, we know of no medieval translations of this work into Latin. Nevertheless, the influence of works like this on the development of mechanical technology is significant and some of the engineering described in the book involves “techniques and mechanisms that... entered the general vocabulary of European engineering at various times from the 7th/13th century onwards.”⁷⁰⁰

There are two Arabic text editions of this book,⁷⁰¹ both with English editorial introductions. There are also two complete facsimile editions, one of the Topkapi manuscript in Istanbul (Turkey), in beautiful full color,⁷⁰² and another black and white facsimile of the Berlin (Germany) manuscript.⁷⁰³ There is also a publication of a partial manuscript that is comprised of only several manuscript leaves.⁷⁰⁴ One of the unfortunate facts about beautifully illustrated historical manuscripts such as these is that, sometimes, unscrupulous

owners or art dealers separate pages from the original book and sell them individually, resulting in portions of a single work being separated and scattered throughout the globe.

In addition to the original Arabic, there is also a complete English translation.⁷⁰⁵ Interested readers may note that the translator of this complete work has also translated one of al-Jazarī's cited sources, the *Kitāb al-hiyal*⁷⁰⁶ of the Banū Mūsá brothers. He has also published a number of scholarly works on early Islamic science and Engineering,⁷⁰⁷ on medieval Islamic technology,⁷⁰⁸ on the history of engineering,⁷⁰⁹ and on water clocks.⁷¹⁰

AL-UQLĪDISĪ'S
AL-FUṢŪL FĪ AL-ḤISĀB AL-HINDĪ
 (“*The Principles of Indian Calculation*”)

Aḥmad ibn Ibrāhīm al-Uqlīdisī (d. after 341/952-3) is a man about whom we know very little. Even medieval biographical sources do not mention him. This dearth of biographical information is completely disproportional to the transformational influence of his work on the development of mathematics and science. His name, al-Uqlīdisī (the Euclidean), tells us less about his mathematical school of thought than about the possibility of his occupation, as this attribution was sometimes applied to scribes and copyists who copied manuscripts of the works of Euclid. His *al-Fuṣūl fī al-ḥisāb al-hindī* (“The [Book] Sections on Indian Mathematics”) is the earliest extant book on positional notation of what we now call ‘Arabic’ numerals, but which were known to the mathematicians and scientists of Islamic civilization as ‘Indian’ numerals. The earliest Arabic book on this subject that we know of was composed by al-Khwārazmī (see next, #89), but that original Arabic text is no longer extant and only its Latin translations remain. A later work, *Uṣūl al-ḥisāb al-hindī* (“The Principles of Indian Calculation”) was composed around 390/1000 by Kūshyār ibn Labbān al-Jīlī (active 4th/11th century) and has been published, but al-Uqlīdisī’s is the earliest such work to survive.⁷¹¹

The *al-Fuṣūl fī al-ḥisāb al-hindī* of al-Uqlīdisī played an integral role in the synthetic endeavor being pursued by the mathematicians

of Islamic civilization: integrating and synthesizing the mathematics of earlier civilizations into a more complete, unified whole. This book introduced Indian numerals, a clear and definite fractional notation system, and provided a method for extracting cube roots. It is divided into four sections, each of which deals with approximately the same subjects (multiplication, division, fractions, roots, minutes and seconds, etc.) but in different ways. Within each section, the subjects are dealt with once in the decimal system and once again in the sexagesimal system. The book included material introduced from Indian mathematics as well as some significant contributions that appear to be the author's own. The application of a clearer fractional notation was a marked improvement over the ancient sexagesimal system. The sexagesimal system is especially useful for astronomical purposes, which is why we continue to use it today for our sixty minutes per hour and sixty seconds per minute, but most would agree that having to deal with all fractions in sixtieths is cumbersome. Few of us would prefer always to conduct our daily transactions thinking '30/60th' instead of $\frac{1}{2}$ and '15/60th' instead of $\frac{1}{4}$. Most readers can appreciate and likely welcome the transition away from such an unwieldy system. Moreover, unlike the ancient methods of representing quantities, such as Roman numerals, and other systems of using letters of the alphabet to represent numbers, the introduction of the Indian system of numerical notation was a revolutionary breakthrough: nine digits and a 'zero' can represent any quantity no matter how large (or small). Importantly, one of the most ingenious and very important aspects of this book, is al-Uqlīdisī's application of this concept in the reverse direction. This work is the earliest documented use of written positional decimal fractions (the Chinese used decimal fractions much earlier, but their written decimal fractions were non-positional). The book also introduced Indian methods of calculating that were much simpler for the medium of ink and paper than the traditional 'dust-board' methods used in al-Uqlīdisī's time. These factors all contributed significantly to the forward progress of mathematics and the synthesis of variegated ancient mathematical systems into a unified mathematical language that

transformed mathematics throughout Islamic civilization, then Europe during its Renaissance, and subsequently, our modern world.

The Arabic original of al-Uqlīdisī's *al-Fuṣūl fī al-ḥisāb al-hindī* has been published⁷¹² and the same editor has published an English translation.⁷¹³ The later work of Kūshyār ibn Labbān al-Jīlī, *Uṣūl al-ḥisāb al-hindī* is also available in English translation.⁷¹⁴

AL-KHWĀRAZMĪ'S
KITĀB AL-JABR WA-AL-MUQĀBALAH

(*“The Book of Normalizing [Setting Back to Normal] and
 Balancing”*)

Muḥammad ibn Mūsá al-Khwārazmī (d. ca. 232/847) was an individual about whom we unfortunately know very little relative to his impact on human civilization. We know that he was from Khwārazm (modern Khiva, Uzbekistan) and that, as a youth of precocious intelligence, he was active in the caliphal capital of Baghdad at the *Bayt al-Ḥikmah* (House of Wisdom) during the caliphate of al-Ma'mūn (r. 189-201/813-817). Through the Latin translations of his works, he “exercised a powerful influence on the development of mediaeval thought.”⁷¹⁵ Some of his work no longer survives in the original Arabic, but we know of it today because it continued to be copied and taught in Latin Europe. We know neither the year of his birth nor of his death with accuracy, but it is estimated that he died in approximately 232/847.⁷¹⁶

Among his works are a book of arithmetic and another book on the Indian Siddhanta astronomical tables, both of which are lost in the original Arabic but survive in their Latin translations. He also composed a work of calendrics, *Risālah fī istikhrāj tārikh al-yahūd* (“Treatise on the Computation of the Jewish Calendar”), which inspired similar works on Jewish Calendrics by later scholars such as al-Bīrūnī (see #99)

and Ibn Maymūn (see #73). He composed an important geographical work, the *Ṣūrat al-ard* (“Image of the Earth”)⁷¹⁷ which was a map of the known world modifying and correcting Ptolemy’s *Geography*. It lists over 2,400 coordinates of latitudes and longitudes for important cities and other sites according to atmospheric ‘weather zones,’ and corrects Ptolemaic inaccuracies about the Mediterranean Sea, Atlantic Ocean, and Indian Ocean. Perhaps his most important contribution is his *Kitāb al-jabr wa-al-muqābalah* (“The Book of Normalizing [Setting Back to Normal] and Balancing”). The ‘normalizing’ refers to the division of coefficients and the elimination of squares, roots, and negatives while the ‘balancing’ refers to cancellation of terms on opposite sides and moving algebraic objects of the same type to one side of the equation, both processes thereby allowing one to solve for the unknown quantity. The work discusses each of these processes in detail and also discusses solving polynomial equations. Linear and quadratic equations are classified into six basic forms: 1) $ax^2 = bx$, 2) $ax^2 = c$, 3) $bx = c$, 4) $ax^2 + bc = c$, 5) $ax^2 + c = bx$, and 6) $bx + c = ax^2$ (where a , b , and c are integer values). After devoting a chapter to each of these six equation types, there are chapters providing geometrical examples in solving unknown quantities, chapters on positives and negatives, multiplication and division, squares and roots, chapters on problems and solutions for each of the six forms of equations, some transactional examples, and further examples of algebraic problems with solutions. The book also includes a lengthy section on calculations of inheritance according to Islamic law. Interested readers should note that, unlike the remainder of the Qur’ān’s over 6,000 verses that are mostly vague generalizations, the Qur’ān’s handful of verses on inheritance regulations are the only verses worded in precise mathematical detail, leaving little (or no) room for any interpretation. Not surprisingly, this section on inheritance calculations was excluded from early Latin translations.

Incidentally, our modern mathematical notation is a relatively new phenomenon (starting about eight hundred years after al-Khwārazmī) and his text discussed all of these mathematical processes in exhaustive detail, written out fully in sentence form. For

example, modern notation such as $a^2 + 2ab = c$ would be documented in classical texts as “A squared plus two times A multiplied by B equals C.” It is not difficult to appreciate modern mathematical notation when one imagines hundreds of pages of complex mathematical formulae fully written out in complete sentences.

This uniquely influential work incorporated various aspects of the mathematics of the Babylonians, Egyptians, Greeks, and Indians, and advanced these techniques significantly further. Most importantly, al-Khwārazmī provided a conceptualization of how to deal with numbers that was more systematized, more unified, and much broader in scope than anything that had been formulated prior. This book had such a great impact that this system of calculation came to be named after the book itself. With time, in referring to this system, the second half of the title was dropped and this method of calculation came to be called simply *al-jabr*, what we now know as ‘algebra.’ The mathematical principles of al-Khwārazmī even filtered into some Jewish biblical commentaries.⁷¹⁸ Latin translations of this work “introduced into Europe a science completely unknown until then.”⁷¹⁹ This and other works such as his astronomical tables had “great influence in the birth of western science.”⁷²⁰ His tremendous impact on the development of mathematics is evident not only by the fact that modern algebra can be traced to the title of this monumentally influential book, but also by the fact that his very name, al-Khwārazmī, in Latinized form, became another mathematical term we use today, the ‘algorithm.’ In honor of his immense contributions to mathematics and science, in 1973, the International Astronomical Union’s Working Group for Planetary System Nomenclature named a lunar impact crater on the far side of the Earth’s moon “al-Khwarizmi” and, in 2006, similarly named eight additional nearby lunar structures.⁷²¹

There are several editions of al-Khwārazmī’s *al-Jabr wa-al-muqābalah* in the original Arabic.⁷²² An English translation with original Arabic text is also available.⁷²³ There is also an English translation and commentary of Robert of Chester’s (active 6th/12th century) medieval Latin partial translation.⁷²⁴

AL-BŪZAJĀNĪ'S
*MĀ RAḤTĀJU ILAYHI AL-ṢĀNĪ‘ MIN ‘ILM AL-
 HANDASAH*

(*“That of the Science of Geometry
 Which is Necessary for the Craftsman”*)

Muḥammad ibn Muḥammad ibn Yahyá al-Būzajānī (d. ca. 388/998, also known as Abu al-Wafā’) was born, very likely to a Persian family, in Būzajān (Būzhgān, on the Iranian side of the intersection of the modern borders of Iran, Afghanistan, and Turkmenistan). His earliest teachers in mathematics were his uncles, who were themselves established mathematicians. At approximately twenty years of age, he moved to Baghdad, where he was in the company of learned men of the capital and at the caliphal court. He was a contemporary of al-Bīrūnī (see #99), who applied spherical geometric techniques in his studies of geography. Abu al-Wafā’ al-Būzajānī continued his mathematical and astronomical work at Baghdad until his death in approximately 388/998.⁷²⁵

Among al-Būzajānī’s works are commentaries on the mathematical writings of al-Khwārazmī (see previous, #89), as well as on the writings of Diophantus and Euclid. He also composed a set of astronomical tables entitled *al-Ẓij al-wādiḥ* (“The Clear Tables”). Unfortunately, none of these books has survived. Among his works that have survived are his *Fī mā yaḥtāju ilayhi al-kuttāb wa-al-‘ummāl min*

‘ilm al-ḥisāb (“That of The Science of Mathematics Which Is Necessary for Scribes and Professionals”). As is clear from the title, it is a work on basic mathematical knowledge necessary for successful accountants, administrators, bankers, financiers, and the like. It is the earliest Arabic work in which negative numbers are used. Another surviving work of his is *al-Kāmil* (“The Complete [Book],” also called the *Almajistī*), of which only the first of seven treatises has survived. Among his notable contributions to mathematics are: his establishment of trigonometric identities in modern form (unlike the chords of the Greeks), his development of a new method for calculation of sines, resulting in more accurate sine tables, and “it is to him that we owe, in spherical trigonometry, for the right-angled triangle, the substitution, for the perfect quadrilateral with the proposition of Menelaus, of the so called ‘rule of the four magnitudes’... and the tangent theorem.”⁷²⁶

His *Mā yaḥtāju ilayhi al-ṣāni‘ min ‘ilm al-handasah* (“That of the Science of Geometry Which is Necessary for the Craftsman”) is, like his other ‘That Which is Necessary...’ guide, a text on the application of mathematical concepts and methods to practical problems for specific professions. This book is on the application of geometric forms and patterns for artisans and craftsmen. Its thirteen chapters begin with a chapter on the instruments used, such as the straight-edge, compass, quick square (right-angled triangle tool), etc., followed by a chapter on the basics of how to divide lines, arcs of circles, and angles, etc., into equal parts; on intersecting through centers of circles and triangles; and on more complex drawings such as mirroring points on opposite ends of circles and parabolas. The third chapter deals with instructions on how to create perfect equilateral polygons, beginning with triangles and proceeding on to squares, pentagons, hexagons, etc., up to a perfectly-angled decagon with ten sides of equal length. The next four chapters deal with how to construct perfect polygons within a circle, how to construct circles perfectly surrounding a polygon, how to construct a perfect circle within a non-equilateral triangle, and how to construct polygons perfectly within other polygons in various combinations (e.g., squares within

pentagons, pentagons within triangles, etc.). Chapter eight deals with dividing triangles into equal or unequal parts, constructing triangles within triangles, and triangles surrounding triangles. The next chapter covers similar material for squares and other quadrilaterals constructed within and surrounding others. The last four chapters deal with more complex constructions of intersecting squares within squares, intersecting circles within circles, and a host of intricately complex geometric constructions of various polygonal structures within and surrounding single and multiple circular structures. The work contains a total of one hundred and seventy-six diagrams of various types of geometric constructions. From this work, one can see the intricacy, complexity, and mathematical precision of the various geometric designs employed by the craftsmen of Islamic civilization. Whether in the medium of carved wood, mother-of-pearl inlay, mosaic tilework, metal work, jewelry, cloth, carved stone, or large architectural pieces, many of the works of artisans, craftsmen, and architects that exemplify the splendor of Islamic civilization in its golden age were the carefully calculated result of mathematics and geometry applied toward the beautification of everyday objects and structures. In short, the work of al-Būzajānī is an instruction manual for the mathematical construction of complex geometric beauty using simple tools.

The *Mā yaḥtājū ilayhi al-ṣānī*‘ of al-Būzajānī has been published in its original Arabic.⁷²⁷ No English translation is yet available. A fairly recent edition of the surviving treatise of his *Majistī* is also available,⁷²⁸ as is a volume of scholarly studies of his work.⁷²⁹ In 1970, a lunar impact crater on the far side of the Earth’s moon was named after al-Būzajānī and, in 2006, two additional nearby features were also named in his honor.⁷³⁰

AL-KARAJĪ'S
AL-KĀFĪ FĪ 'ILM AL-ḤISĀB

(“*The Sufficient [Book] on Calculation*”)

Muḥammad ibn al-Ḥasan (alternatively, ibn al-Ḥusayn) al-Karajī (d. after 410/1019) was born to a Persian family in Karaj (just northwest of Tehrān in modern Iran). We know that at an early age he moved to the caliphal capital, Baghdad, and that his mathematical and engineering brilliance earned him governmental administrative positions. We know little additional biographical information other than that he eventually left Baghdad and returned to his hometown. He is presumed to have died at or near his native Karaj sometime after 410/1019 (the year he likely composed his *Inbāṭ*).⁷³¹

He composed a number of works, most of which have not survived, but his fame rests on several important works that are available to us. His *al-Fakhrī fī al-jabr wa-al-muqābalah* (“The Book of Algebra [for Fakhr]”) was dedicated to Fakhr al-Mulk, high minister to Bahā’ al-Dawlah (r. 377-402/988-1012), the Būwayhī ruler of Irāq. It is an algebraic work based on the *Arithmetica* of Diophantus of Alexandria, which was popular at al-Karajī’s time. The *al-Fakhrī* describes al-Karajī’s studies of successive powers of a binomial and documents his discovery of the binomial theorem using what is now called ‘Pascal’s triangle,’⁷³² six centuries before the birth of Blaise Pascal (d. 1662). It is also known as ‘al-Khayyām triangle’ (see #94) and by other names in Indian and Chinese mathematics. His

*al-Badīʿ fī al-ḥisāb*⁷³³ (“The Unprecedented [Book] on Calculation”) deals with some Euclidean and other problems and “expounds for the first time the theory of the extraction of the square root of a polynomial with an unknown.”⁷³⁴ He also has a remarkable manual on hydraulics, the *Inbāʿ al-miyyāh al-khaṭīyah*⁷³⁵ (“Tapping Hidden [Sources of] Water”), in which he details the construction and maintenance of *qānāts*, an ingenious ancient Persian technique for accessing water in the desert and even forming and storing ice. This remarkable method of greening the desert and sprouting agricultural oases in the most inhospitable environments spread eastward across the silk road to China, westward across the Middle East to North Africa, and across the Mediterranean into Europe, where *qānāt* still exist in Palermo in Sicily, and in Granada, Madrid, and other cities in Spain. From Spain the Conquistadores brought *qānāt* technology across the Atlantic Ocean to Mexico, while pre-Columbian Andean cultures appear to have applied similar concepts independently in their construction of local *puquios*.⁷³⁶

One of his most influential works is his *al-Kāfī fī al-ḥisāb* (“The Sufficient [Book] on Calculation”). It served as a guide for civil servants working for the government administration in Baghdad. It is a textbook on mathematical functions and instructs the reader in the methods of calculation, including integers and fractions, squares and square roots, the calculation of areas and volumes, etc. In essence, it summarizes arithmetic, algebra, and geometry, as well as ‘mental’ calculation.⁷³⁷ The significance of al-Karājī’s work is that he combined an understanding of the classical Greek work of Diophantus and applied the new algebraic methods of Islamic civilization deliberately in such a way as to divorce algebra from the Greeks’ tendency towards geometric solutions. He combined all the computational tools available to him for dealing with known mathematical quantities into a comprehensive system that allowed those same tools also to be applied to unknown quantities and to irrational terms.⁷³⁸ The significance of this was not lost on later mathematicians. For example, the work of al-Karājī was familiar to Leonardo of Pisa (d. ca. 648/1250, later called Fibonacci) whose 1202 book

Liber Abaci popularized in Europe what we now call ‘Arabic’ numerals. In addition to such discoveries as the earliest documented algebra of polynomials, the earliest extraction of polynomial square roots, and other firsts, al-Karājī’s conceptualization of this new way of thinking was among his undeniable contributions to the advancement of mathematics.⁷³⁹

The Arabic original of al-Karājī’s *al-Kāfī fī al-ḥisāb* has been published⁷⁴⁰ with an explanatory appendix ‘translating’ relevant sections of text into modern mathematical notation (using Eastern Arabic numerals). No English translation is yet available, but specialists may benefit somewhat from the modern mathematical notation provided in an early German translation (using Western Arabic/European numerals).⁷⁴¹ Selected chapters of al-Karājī’s *Inbāʾ al-miyāh al-khafīyah*, on surveying for water and required instrumentation have also been translated into English.⁷⁴²

AL-FARGHĀNĪ'S
KITĀB JAWĀMI' 'ILM AL-NUJŪM

(*"The Compilation of the Science of the Stars"*)

Aḥmad ibn Muḥammad ibn Kathīr (d. after 247/861) is commonly known as al-Farghānī, indicating that either he himself or his family were from either the city of Farghānah (modern Uzbekistan) or somewhere in the Farghānah valley that is currently between Uzbekistan, Kyrgyzstan, Tajikistan, and Kazakhstan. We know little of his early life or his family. We do know that he was active at the court of the Abbāsī rulers at Sāmarrā' (in modern Iraq) and possibly also at Baghdad. In Iraq, he appears to have worked unsuccessfully on some hydraulic engineering projects with the Banū Mūsā brothers (see al-Jazarī, #87), and was then sent to Fuṣṭāṭ (modern Cairo, Egypt), where he successfully restored a nilometer. He appears to have died there and was buried there, sometime after 247/861, when these projects were completed.⁷⁴³

He is known for two of the earliest surviving works on the astrolabe, his *al-Kāmil fī al-aṣṭurlāb* ("The Complete [Book] on the Astrolabe") and *Fī sinā'at al-aṣṭurlāb* ("On the Manufacture of Astrolabes").⁷⁴⁴ He is also known for other astronomical works such as *Ta'līl li-zīj al-Khwārazmī* ("The Justification of the [Astronomical] Tables of Khwārazmī," see #89), *Kitāb 'ilal al-aflāk* ("The Book of the Principles of the Spheres"), and *Kitāb 'amal al-rukhāmāt* ("The Book of Making Horizontal Sundials").⁷⁴⁵ But the work for which he is best

known is his *Kitāb jawāmi‘ ʿilm al-nujūm wa-al-ḥarakāt al-samāwīyah* (“The Compilation of the Science of the Stars and Heavenly Movements”), which also goes by several other similar titles, as well as one in which it is simply called *Kitāb al-fuṣūl al-thalāthīn* (“The Book of Thirty Sections”). It contains thirty chapters, beginning with one on calendrics (Arab, Roman, Egyptian, and others) followed by a chapter on the sphericity of the heavens. The next seven chapters cover the sphericity of the Earth, its position in the universe, the motions of the universe and planets, the length of the Earth’s day, the Earth’s size and climates, and known cities by climate. The subsequent chapters cover variations in the zodiac by latitude, variations in length of day, epicycles, movements of the sun, moon, and stars, the apparent retrograde motion of planets, visible retrograde movements, sizes and distance of epicycles from Earth, synodic and sidereal measurements, and latitudinal movements. The next chapters deal with magnitudes of stars, the lunar mansions, distances of stars and planets from Earth, sizes of stars and planets, orbital variations, rising and setting of planets, rise and brightness of the moon, planetary visibility, and planetary parallax. The final three chapters cover lunar and solar eclipses and the periods between eclipses. The work summarizes Ptolemy’s *Almagest* and adds corrections and other findings discovered by the astronomers of Islamic civilization. Its reasonable length and relative simplicity made it very popular. It was translated into Latin twice in the 6th/12th century and also translated into Hebrew not long after. It quickly became the work “more widely circulated in the west than that of any other Arabic astronomer.”⁷⁴⁶ It was Dante’s (d. ca. 721/1321) “standard reference book” for Ptolemaic astronomy.⁷⁴⁷ And Columbus (d. 1506) used al-Farghānī’s calculation for the circumference of the Earth in planning his westward route to India.⁷⁴⁸ In his 1651 publication, *Almagestum Novum*, Jesuit priest and astronomer Giovanni Riccioli (d. 1671) named a crater on the Earth’s moon ‘Alfraganus’ in al-Farghānī’s honor.⁷⁴⁹ This was officially recognized in 1935 by the International Astronomical Union and, in 2006, nine nearby structures were also named in al-Farghānī’s honor.⁷⁵⁰

The Arabic original of al-Farghānī's *Kitāb jawāmi' 'ilm al-nujūm* is available in a recent edition with Turkish translation,⁷⁵¹ and another older edition with Latin translation and commentary.⁷⁵² There is not yet an English translation of the *Kitāb jawāmi' 'ilm al-nujūm*, but al-Farghānī's work on the astrolabe is available in a critical Arabic edition with English translation.⁷⁵³

AL-BATTĀNĪ'S

AL-ẒĪĜ AL-ṢĀBĪ

(*"Astronomical Tables of al-Ṣābī [the Sabian]"*)

Muḥammad ibn Jābir ibn Sinān (d. 317/929, known as al-Ṣābī and al-Battānī, Latin 'Albategnius') was born at or near Ḥarrān (just on the Turkish side of the modern border between Turkey and Syria) to a family of Sabian origin. It appears that his father may have been a maker of scientific instruments. He lived most of his life at Raqqah (modern Syria). Sometime after the age of twenty, he began to focus on astronomical observations. We know little else about him other than that he continued his devotion to astronomical observations for the remainder of his life, with occasional travels to Baghdad. During the return leg of one of these trips, in the year 317/929, he died near Sāmarrā' (modern Iraq).⁷⁵⁴

He authored several works, including a work on the ascensions of zodiacal signs, a trigonometric solution for calculation of the rays of stars outside the ecliptic, and a commentary on Ptolemy's *Tetrabiblos*. Unfortunately, none of these has survived. His main work, which has survived, is his ẒĪĜ ("Astronomical Tables"). It contains the sum of the astronomical observations to which he devoted nearly his entire life. It is comprised of fifty-seven chapters covering astronomical subjects comprehensively, beginning with the division of the celestial sphere and proceeding through chapters on such subjects as

distances, elevations, rising and setting of stars, on accurate time-keeping, on Arab, Roman, Persian, and Coptic calendrics, on the moon and sighting the new moon, on eclipses, etc., and ending with a chapter on accurate timekeeping during the day (in the absence of stars) and accurate determination of the direction of Mecca (modern Saudi Arabia) for daily prayers. These fifty-seven chapters of text and diagrams are followed by numerous charts and tables, including historical chronologies of Greek and Islamic rulers, geographic coordinates of major cities, a separate table for geographic coordinates of cities in Andalusia and North Africa, zodiacal and other tables, as well as star charts with coordinates of stars organized by the constellation within which the stars are visible.

His observations proved that aspects of Ptolemaic theory were incorrect and he makes corrections to centuries-old Ptolemaic dogma, including the notion that the solar apogee is fixed (al-Battānī showed that there is incremental variation) and the notion that there is no variation in the angular diameter of the Sun (al-Battānī showed that there is, and that annular eclipses are therefore possible). He measured and calculated very accurately the Earth's axial tilt, the tropical year, and the orbits of the sun, moon, and planets. He also corrected Ptolemy's figure for the precession of the equinoxes and solved spherical geometric problems by orthographic projection. The *Ẓīj* of al-Battānī underwent several translations into Latin and exerted "considerable influence, not only on Arab astronomy but also on the development of astronomy and spherical trigonometry in Europe in the middle ages and beginning of the Renaissance"⁷⁵⁵ including influence on Johannes de Monteregio (d. 881/1476), Copernicus (d. 1543), Tycho Brahe (d. 1601), and others. Giovanni Riccioli (d. 1671) in his 1651 publication, *Almagestum Novum*, named a crater on the near side of the Earth's moon 'Albategnius' in honor of al-Battānī.⁷⁵⁶ This was officially recognized in 1935 by the International Astronomical Union and, in 2006, an additional sixteen associated structures were also named in honor of al-Battānī.⁷⁵⁷

The *Ẓīj* of al-Battānī, also known as *al-Ẓīj al-Ṣābī*, has been published in its original Arabic⁷⁵⁸ as the third volume of a three-

volume series. The first and second volumes of the *Opus Astronomicum*⁷⁵⁹ comprise the Latin translation of text and diagrams and the Latin translation of astronomical tables, respectively. There is not yet an English translation. The geographic tables of al-Battānī have also been translated into Italian⁷⁶⁰ and, since the bulk of the text is romanization of the Arabic names of cities and their respective geographic coordinates, it may be just as useful to an interested English language reader familiar with Arabic romanization.

‘UMAR AL-KHAYYĀM’S
AL-JABR WA-AL-MUQĀBALAH
 AND *THE JĀLĀLĪ CALENDAR*

*(“The Book of Normalizing [Setting Back to Normal]
 and Balancing”)*

‘Umar ibn Ibrāhīm al-Khayyām (d. ca. 517/1123) was born in Nīshāpūr (modern Iran) to a family native to that city for at least several generations. While his name, al-Khayyām, implies the profession of tent-maker, it is unclear how many generations distant this family name was acquired. He is more familiar to many by the Persian version of his name, ‘Umar Khayyām. The city of Nīshāpūr was a major regional center and was particularly influential under the Saljūq dynasty that ruled the area during al-Khayyām’s lifetime. The city was also a local center of Zoroastrianism at the time, making it quite possible that al-Khayyām’s family were originally Zoroastrian converts to Islam. He exhibited unique talents at an early age. His first teachers quickly recognized his precocious intelligence and advanced him to study under the most famous teachers of the city. By his mid-twenties, he was already in the service of the Saljūq sultān, Malikshah I (r. 465-485/1072-1092). His talents were noticed by government officials and he was invited by the sultān’s chief minister to the royal court at Isfāhān (modern Iran). There, al-Khayyām had access to even greater intellectual resources at the

royal libraries. Here he mastered translated Greek sources, as well as the works of Arabic philosophers, physicians, and scientists, and quickly became one of the scholars favored at court. He was also assigned to help administer the construction of a new astronomical observatory at Isfāhān. He was exposed to, and influenced by, the work of Ibn Sīnā (see #70) directly through one of the master's disciples. Al-Khayyām also showed an intimate familiarity with the poetry of Abū al-'Alā' al-Ma'arrī (see #56). After the death and assassination of his patrons, he was invited to Marv (just southeast of modern Mary, in Turkmenistan), seat of the court of the new sultān, Sanjār (r. 511-552/1117-1157), and where al-Khāzinī (see #86) was his student. Throughout his life, he associated with some of the greatest luminaries of his time, including one of the greatest masters of Persian poetry, Sanā'ī (d. ca. 524/1130), and the rationalist theologian al-Zamakhsharī (see #5), whose lectures al-Khayyām frequented. In his old age, he returned to his native Nishāpūr, where he lived a life of seclusion until his death in approximately 517/1123. The precise year of his death is disputed, but the place is known and a mausoleum has been built at the site in Nishāpūr.⁷⁶¹

He is known to us now as a poet and the author of the famous *Rubā'iyāt*⁷⁶² ("Quatrains"). This is largely due to the spectacular success of the English translation⁷⁶³ of al-Khayyām's poetry by Edward Fitzgerald (d. 1883), which found incredible commercial success with hundreds of editions published and millions of copies sold. Such popularity was unheard of at the time (and would be surprising even today!) for a translation of a foreign poetry collection. It contributed significantly to the popularization of 'Umar al-Khayyām as a mystical poet. However, in spite of this fame for his poetic mastery, al-Khayyām was, by profession, an astronomer and mathematician. In mathematics, he "discovered solutions to equations that earlier writers had thought unsolvable."⁷⁶⁴ He was aware of a general binomial theorem and extracted roots using what some today call 'Pascal's' triangle, but which is, in parts of the Middle East, still referred to as 'al-Khayyām's triangle.' In his Algebraic work, *al-ġabr wa-al-muqābalah*,⁷⁶⁵ which is also available in English translation,⁷⁶⁶

al-Khayyām advanced the mathematics of cubic equations far beyond the capabilities of earlier Greek masters. While the Greeks were aware of third-degree equations, they only attempted to solve a few such equations and did so geometrically, without algebraic work in their geometric solutions. ‘Umar al-Khayyām was the first to solve every possible type of cubic equation with positive roots. He gave “a complete classification of the forms of cubic equations and constructed a geometrical solution for each type”⁷⁶⁷ and al-Khayyām’s work marks the first systematic treatment of the subject. He proved Indian square and cubed roots, and proceeded to determine fourth-, fifth-, sixth-order roots, and beyond.⁷⁶⁸ In his *Sharḥ mā ashkala min muṣādarāt kitāb Uqlīdus*⁷⁶⁹ (“Commentary on Problematic Postulates of Euclid’s Book [*Elements*]”), he addresses the parallel axiom and contributes significantly to shattering established dogma in geometry by proving that non-Euclidean geometry is possible. Al-Khayyām’s treatment of parallels was later expanded upon by Naṣīr al-Dīn al-Ṭūsī (see #95, next). The work of al-Ṭūsī, in Latin translation, was familiar to Girolamo Saccheri (d. 1733), whose publication of *Euclid Freed from Every Vault* is mistakenly credited with being the earliest stage in the development in non-Euclidean geometry. What is now called the ‘Saccheri quadrilateral’ was initially introduced by al-Khayyām six centuries before Saccheri.⁷⁷⁰ Al-Khayyām’s treatise also addresses problematic theoretical aspects in the definition of ‘ratios’ and ‘numbers’ and paves the way for mathematical concepts in later number theory such as irrational numbers and real numbers.

While recognizing his immense contributions to advancing mathematics, we have placed ‘Umar al-Khayyām in this section on astronomy in deference to a different, but intimately related achievement of his: the Jalālī calendar. Along with the team of astronomers at the royal observatory in Iṣfahān, al-Khayyām recognized that the minor annual divergence of the Islamic lunar calendar from the solar calendar had accumulated significantly in the centuries since Muḥammad. The cumulative result of centuries of a minor annual shift resulted in seasonal dates beginning to drift out of season. This was particularly problematic for administrative reasons such as tax

collection on harvests, and for Persianate cultures that celebrated the spring equinox as a holiday (*nawrūz*). A similar problem was addressed in Christendom five centuries later, when Pope Gregory XIII (r. 1572-1585) modified the Julian calendar by deleting ten days, to ensure that Easter always falls in the spring season. Al-Khayyām and his team of astronomers developed a calendar that maintained the Islamic *hijrah* (migration of Muḥammad) as the beginning of the dating system, but adjusted the calendar to match the solar year rather than the traditional Semitic lunar year. This system consisted of months between twenty-nine and thirty-two days of length, determined by the solar transit across stellar constellations of the zodiac (similar to the ancient Indian solar calendar), resulting in a calendar where drift never exceeds twenty-four hours annually and self-corrects without leap years (unlike the Gregorian calendar). This innovative method of calculation was adopted by al-Khayyām's patron sultān, spread throughout the empire, and remains in use (in modified form) in modern Iran and Afghanistan. Because it is based on astronomical observation, its determination of the Spring Equinox is still more accurate than that of the Gregorian calendar, whose determination is based on mathematical calculations. The Jalālī calendar reshaped dramatically the administrative, religious, and cultural landscape of the Persianate sphere of Islamic civilization for centuries, and remains in use today.

NAṢĪR AL-DĪN AL-ṬŪSĪ'S
TADHKIRAH FĪ 'ILM AL-HAY'AH

(*"Memoir on the Science of Astronomy"*)

Naṣīr al-Dīn al-Ṭūsī (d. 672/1274, not to be confused with Abū Ja'far al-Ṭūsī of sections I and II) was born in Ṭūs, a village on the outskirts of Mashhad (modern Iran) to a family originally from a village near Qum (about 90 miles south of modern Tehran, Iran). His father, a jurist, ensured that he receive a classical education in Arabic language, Qur'ān, *ḥadīth*, and jurisprudence. He developed an interest in philosophy and, after his preliminary education, traveled to nearby Nishāpūr (modern Iran) where he studied the philosophy of Ibn Sīnā (see #70), mathematics, science, and medicine under some of the students of Fakhr al-Dīn al-Rāzī (see #7). He also travelled to Mosul (modern Iraq), where he studied mathematics and astronomy. He then received the patronage of an Ismā'īlī governor at Sartakht (modern Iran) and, at some point, ended up at the famous Ismā'īlī fortress of Alamūt (between the modern Iranian city of Qazvīn and the shores of the Caspian Sea), where he appears to have spent about two decades until the approach of the Mongol invasion. During the Mongol attack, he was chosen to negotiate with Hulegu Khan (r. 654-663/1256-1265), but was unsuccessful in sparing Alamūt. The Mongols crushed the bastion of the Ismā'īlī movement, and took al-Ṭūsī with them as they pressed their conquests westward, culminating in the historic sack of Baghdad that sealed the end of the

‘Abbāsī caliphate. Hulegu Khan assigned to al-Ṭūsī administrative duties and, one year after the sack of Baghdad, he was in charge of constructing an astronomical observatory at Marāghah, just south of Tabrīz (modern Iran). A massive library was also being established there (supplied by books taken from cities during the Mongols’ conquests) and it quickly became an intellectual center attracting notable scholars of various faiths from throughout the region. Fifteen years later, for reasons that are not entirely clear, he left for Baghdad. He died there in 672/1274, within months of his arrival, and is reportedly buried near the grave of the Shī‘ī Imām Mūsá al-Kāẓim (d. 183/799).⁷⁷¹

Naṣīr al-Dīn al-Ṭūsī authored over a hundred works, the overwhelming majority of them in Arabic, and some in Persian. He was not only prolific but also exhibited a mastery of many disciplines, from astronomy,⁷⁷² mathematics,⁷⁷³ and physics, to mineralogy, medicine, philosophy,⁷⁷⁴ logic,⁷⁷⁵ theology,⁷⁷⁶ Šūfism,⁷⁷⁷ and poetry.⁷⁷⁸ The immense scholarly contributions of al-Ṭūsī, especially in philosophy, earned him in later centuries the sobriquet ‘the third teacher,’ preceded only by Aristotle and al-Fārābī (see #69). He is one of the very few Shī‘ī scholars whose remarkable intellectual contributions are so significant that he is respected even by objective scholars from among the Sunnī Muslim community.

The result of his astronomical observations at Marāghah is his major astronomical treatise, the *Ẓīj-e Ilkhānī*⁷⁷⁹ (“The Astronomical Tables of the Il-Khān”), the accurate measurements of which served as a basis for later astronomers, including the *Ẓīj-e Ilkhānī* of al-Kāshī (d. 832/1429). He also composed a work entitled *Tadhkirah fī ‘ilm al-hay’ah* (“Memoir on the Science of Astronomy”). It is a work divided into four sections. The first serves essentially as an introduction and is composed of two chapters that review the necessary prerequisites in geometry and in natural philosophy. The second section is on the heavens and contains fourteen chapters on the stars, sun, moon, planets, eclipses, conjunctions, parallax, and related matters. The third section is on the Earth and contains twelve chapters on the Earth’s position in space, its equator, the ecliptic, axial tilt, basic

timekeeping and calendrics, and finding the direction towards Mecca (modern Saudi Arabia). The fourth and final section is on measurements and distances. It includes seven chapters on such subjects as the size of the Earth, the sizes and volumes of the sun and moon, their distances from the Earth, and distances of other planets and other stars from the Earth. The work is essentially Ptolemaic in basis, but with critical modifications, as was typical of the astronomers of Islamic civilization who noticed that their objective observations did not match the classical theories of the Greeks. For example, he developed a geometric technique that replaced Ptolemy's equant concept and this technique continues to bear his name: the 'Tūsī couple' that allows for linear motion from two circular motions. While al-Tūsī's planetary model did not resolve all Ptolemaic inconsistencies, it was the most advanced of its time and continued to hold sway until the development of the heliocentric model. The *Tadhkirah* and his other astronomical works have earned al-Tūsī a firm place in the history of science and mathematics. He is listed prominently in the Mathematics Genealogy Project as having 144,218 intellectual 'descendants',⁷⁸⁰ nearly ten times as many as Isaac Newton. The inner MBA (Main Belt Asteroid) #7058 (al-Tusi) discovered 16 September 1990 by Henry E. Holt at the Palomar observatory in California,⁷⁸¹ the outer MBA #10269 (Tusi) minor planet discovered 24 September 1979 by Nikolai Chernykh at the Crimea-Nauchnij observatory on the Crimean Peninsula,⁷⁸² a lunar crater on the near side of the Earth's moon (Nasireddin, in 1935), and an associated structure (Nasireddin B, in 2006),⁷⁸³ have all been named in honor of Naṣīr al-Dīn al-Tūsī.

The *Tadhkirah fī 'ilm al-hay'ah* of al-Tūsī is available in its original Arabic⁷⁸⁴ as well as in English translation.⁷⁸⁵ Several others from among his many works are also available in English translation. His *Akhlaq-e Nāṣirī*,⁷⁸⁶ ("Nāṣirean Ethics") is a work on ethics in which, incidentally, he expounds the essential premises of evolution six centuries before Darwin (d. 1882). He discusses hereditary changes, adaptations of organisms to their environments, and places human beings squarely within the framework of the evolutionary processes

as one of the advanced animals.⁷⁸⁷ His Persian *Rawḍa-yi taslīm*⁷⁸⁸ (translated into English as “The Paradise of Submission”) describes Ismā‘īlī cosmology and serves essentially as a travel-guide to the spiritual world. Several theological treatises have been translated⁷⁸⁹ as well as one of his medical works.⁷⁹⁰ An English translation of his autobiographical spiritual journey is also available.⁷⁹¹

AL-YA‘QŪBĪ’S
KITĀB AL-BULDĀN

(*“The Book of the Realms”*)

The limited biographical information that we have about Aḥmad ibn Abī Ya‘qūb ibn Ja‘far, known as al-Ya‘qūbī, has already been mentioned (see #63), but will be repeated here due to its brevity. We know little of his life other than that he was born in Baghdad, that he was an established member of the secretarial class and that he served in administrative roles in Armenia, in Khurāsān (a historical region spread across modern Iran, Afghanistan and Central Asia), and in Egypt, where he died sometime in the early 3rd/10th century.⁷⁹²

In addition to his *Tārīkh* (see #63), one of the earliest universal histories in Islamic literature, and a short treatise called *Mushākalat al-nās li-zamānihim* (“People’s Adaptation to their Times”), he is also known for his geographic work, *Kitāb al-buldān* (“The Book of the Realms”). It is an administrative geography that includes topographical information, travel routes, distances, as well as historical, political, and anecdotal information. It begins with relatively lengthy entries on the cities of Baghdad and Sāmarrā’ (both in Iraq), both afforded preference because of their status as administrative capitals of the ‘Abbāsī empire and seats of the caliphate. Then, the book is separated into four quarters, one for each cardinal direction. The first is the eastern quadrant, beginning with the easternmost borders

of Baghdad and extending across the Mesopotamian lowlands towards the mountain ranges of the Iranian plateau, the shores of the Caspian Sea, and deep into Central Asia. The southern quadrant leaves Baghdad following the Euphrates River towards the Arabian Peninsula to the Yemen and includes the islands off the Yemeni coast. The third quadrant leaves Baghdad following the Tigris River as it empties into the Persian Gulf, then along the southern coast to Oman, and then towards India. Unfortunately, most of this section has not survived. The text for this route is available only up to the city of Baṣrah (modern Iraq), and of that entry, only the first few lines. The last quadrant covers the major cities west of Baghdad towards the shores of the Mediterranean Sea, across the Sinai into Egypt and Nubia, across North Africa and across the straits of Gibraltar into the Iberian Peninsula. Based on al-Ya‘qūbī’s own “travels in Armenia, Ādharbāydjān, India, and North Africa, and, no doubt on his experience in the caliphal administration, this book provides much historical, topographical and statistical information on the regions it describes.”⁷⁹³

The *Kūtāb al-buldān* of al-Ya‘qūbī is available in several Arabic editions.⁷⁹⁴ There is not yet any English translation.

AL-MUQADDISĪ'S
AḤSAN AL-TAQĀSĪM FĪ MA'RIFAT AL-AQĀLĪM
 ("The Best of Divisions for Knowledge of the Regions")

Muḥammad ibn Aḥmad ibn Abī Bakr (d. after 380/990, also known as al-Muqaddisī or al-Maqdisī) was born in Palestine, and likely in Jerusalem as his *nisbah* suggests (after *al-bayt al-muqaddas* or *bayt al-maqdis*, the holy house). His family on his mother's side was originally from a small village of Biyār (today's Biyārjomand, nearly halfway between Tehrān and Mashhad in modern Iran) but his grandfather moved to Jerusalem and settled there. The family was presumably middle-class, neither poor nor extremely well-to-do, and one can infer that he received the type of classical literary education that would have been available to the child of such a family. He reports that he performed the pilgrimage to Mecca three times and that, over a period of about two decades, he travelled from North Africa to the region of his maternal family's homeland and almost to India. He died sometime after 380/990, with one estimate being around the year 391/1000.⁷⁹⁵

He is known to history for his geographical work, *Aḥsan al-taqāsīm fī ma'rifāt al-aqālīm* ("The Best of Divisions for Knowledge of the Regions"). In fact, he states explicitly that his aim was to compose just such a book so that his name would live on throughout history. While earlier writers also composed geographies, his reported aim was to inaugurate a new discipline: a 'science' of geography that is

systematic, factual, and objective. He preferences his own first-hand accounts and lists of the people, climates, customs, foods, and distances of the places he visits. His comprehensive approach “covers all the fields that it is agreed upon to call geography today: physical, economic, political, and human.”⁷⁹⁶ He also offers accounts from eyewitnesses and written sources, but is deliberately meticulous in his citations and goes to great lengths to delineate what information comes from which source. It is in this vein that he explains, painfully, that he was unable to visit two of the regions described in the book. All others, however, are documented in accordance with his own experiences. In addition to this objective and meticulously documented presentation of the information, the author also aims for a systematic approach that he found lacking in the geographies of his predecessors. In fact, it is this “systematization of the subject matter and method which makes al-Muqaddisī the finest representative of this science of geography of Islam in the 4th/10th century.”⁷⁹⁷

After some preliminary remarks on his methods and an overview of earlier literature in the genre, the author begins with several brief introductory sections that include one on seas and rivers, one listing names shared by different geographic entities (for example, there is a Baṣrah in Iraq and another Baṣrah in North Africa) as well as a listing of towns and cities with multiple names, a brief description of distinctive features of various regions, an overview of various schools of thought in Islam and some other religions, a sort of table of contents listing major cities and smaller towns within their jurisdictions, and finally, a section on the seven climes along the lines of the Greek concept but with Mecca (modern Saudi Arabia) as the epicenter. After these introductory sections, the main text begins and covers fourteen regions: six Arab (from the Arabian Peninsula west to Andalusia) and eight non-Arab (from the Iranian plateau east into Central Asia and to the borders of the Indian subcontinent). This remarkable text, deliberately conceived by the author as a foundational source in a new ‘science’ of geography, not only proved useful to travelers, pilgrims, merchants, rulers, and administrators, but also achieved the

author's stated goal of composing a work that would cause his name to be remembered throughout history.

The *Aḥsan al-taqāsīm* of al-Muqaddisī's has been published in the original Arabic along with an index with corrigenda.⁷⁹⁸ A complete contemporary English translation is also available,⁷⁹⁹ as well as an older 1897 Arabic edition with English translation.⁸⁰⁰ There is also a work on the author with selected English translations.⁸⁰¹

AL-IDRĪSĪ'S

*NUZHAT AL-MUSHTĀQ FĪ IKHTIRĀQ AL-ĀFĀQ**("The Pleasant Journey of**One Who Yearns to Cross the Horizons"),*also known as *Kitāb Rūjar* (*"The Book of Roger"*)

Muḥammad ibn Muḥammad ibn ‘Abd Allāh, commonly referred to as al-Sharīf al-Idrīsī, is another figure whose biographical information is scant compared to his contribution to human civilization. We know very little about him with certainty, but it is speculated that he was born at Ceuta (today, a territory of Spain but on the African continent, across from the Straights of Gibraltar). It appears that he studied in Cordova (modern Spain) and that he travelled widely in Andalusia and North Africa. At some point, and for reasons that are not entirely clear, he moved to Sicily, where he was welcomed at the court of the Roger II (r. 1130-1154), who united the Norman conquests of Italy under one kingdom. He seems to have settled in Sicily and presumably died there. One view is that he died in the year 560/1165, although the date is uncertain.⁸⁰²

Among the works he composed was a treatise on simple (i.e., non-compound) remedies entitled *Kitāb al-jāmi‘ li-ashtāt al-nabāt* ("The Compendium of Plant Extracts"), but this is not the work upon which his fame rests. While under the patronage of Roger II, al-Idrīsī harnessed all of his geographic knowledge and all the

information available to him in the composition of a complete map of the world. This map was then etched by court craftsmen onto a large silver disc nearly six feet wide and weighing four hundred and fifty pounds. This silver ‘planisphere’ was engraved on one side with stellar constellations including the zodiac and on the other with one of the most accurate maps of the world at the time. At the request of King Roger, al-Idrīsī composed a book providing additional details to accompany the engraved planispheric map. It is this book for which al-Idrīsī is most famous, the *Nuzhat al-mushtāq fī ikhtirāq al-āfāq* (“The Pleasant Journey of One Who Yearns to Cross the Horizons”). It is also known as *Kitāb Rūjar* (“The Book of Roger”), as the author dedicated it to his patron.

This remarkable work systematically covers all of the seven Ptolemaic climes from west to east and from south to north. In each section, he first provides general regional information and lists the main cities. He then provides details for each city and lists travel distances between cities. His map and accompanying book contain the most detailed geographic information known at the time and cover the entirety of the Eurasian land mass, as well as the northern portion of Africa. It includes more detailed information on the Baltics than earlier maps, and also includes details of French coastal cities and even some inland towns, as well as details of Ireland and the North Sea as far as what some scholars believe to be Greenland. It continues eastward as far as the Pacific, mentions cities as far East as Hangzhou and Quanzhou in China, and also mentions the Korean peninsula. The work is lacking when it comes to southeast Asian archipelagos and the southern portion of Africa, and there is a clear Sicilian bias, with much detail on Sicily and even a larger-than-life depiction of Sicily on the map illustration. Nevertheless, al-Idrīsī’s work remains historically significant. It depicts clearly the sources of the Nile, a discovery commonly misattributed to 19th century European explorers. He even describes Andalusian and North African sailors as having crossed the Atlantic, having found ‘red-skinned’ natives and returned, but this description continues to be debated by historians, along with other pre-Columbian trans-Atlantic contact theories. His

book was translated into Latin as the *Opus Geographicum*. His map was known in Latin as the *Tabula Rogeriana* and was copied, unchanged, for three centuries afterwards. It is highly unlikely that European navigators such as Christopher Columbus (d. 1506) and Vasco da Gama (d. 1524) would have been unfamiliar with the geographical work of al-Idrīsī.

A scholarly critical text edition of the Arabic original has been published⁸⁰³ as well as more recent Arabic editions.⁸⁰⁴ The Bibliothèque Nationale (Paris) manuscript, which is written in Maghribī script and has beautifully illustrated maps, is available on CD.⁸⁰⁵ There is also an Iraqi government publication of al-Idrīsī's map of the world.⁸⁰⁶ Although there is no complete English translation of al-Idrīsī's *Nuzhah*, there is an English language work on al-Idrīsī's sections on India and neighboring regions.⁸⁰⁷ In addition, a number of other translations are available, many dealing with particular regions of al-Idrīsī's geographic work. There are four Spanish language works on his treatment of Spain, one of which contains the Arabic text,⁸⁰⁸ a French translation of the sections on Spain and Africa, with the Arabic original,⁸⁰⁹ a French work on the Baltic regions,⁸¹⁰ a complete French translation,⁸¹¹ an Italian work on his treatment of Italy,⁸¹² and a Persian work on his treatment of the Iranian highlands.⁸¹³

A modern geospatial analysis and image processing engine has been named in honor of al-Sharīf al-Idrīsī. The integrated Geographic Information System and remote sensing software program developed in 1987 by J. Ronald Eastman of the Department of Geography at Clark University was named IDRISI⁸¹⁴ "to give acknowledgement to al-Idrisi's accomplishments, in particular, the inclusive nature of his research during his time in the court of King Roger."⁸¹⁵ In 2015 the program as a whole was renamed TerrSet Geospatial and Modeling software and continues to include the IDRISI engine.

AL-BĪRŪNĪ'S
MAS'ŪD QĀNŪN

(*"The Canon of [Sulṭān] Mas'ūd"*)

Muḥammad ibn Aḥmad (d. after 422/1050, known as al-Bīrūnī) was born in the outskirts (*bīrūn*) of the city of Kāth, regional capital of the Āfrīghī dynasty that ruled the area from pre-Islamic times. The city lies on the banks of the Amu Darya River in modern Uzbekistan and in 1957 was renamed Beruniy in his honor. He was born to an Iranian family and his early education included study under some local masters in such fields as mathematics. He also corresponded with Ibn Sīnā (see #70), who, at the time, was at Bukhārā (about 250 miles southeast in modern Uzbekistan). At about age twenty-five, he began to travel and was welcomed at royal courts in Jurjān (Gorgān, modern Iran) and further west at Rayy (near modern Tehran, in Iran). He then returned to his homeland and worked for several years in the service of the royal court of the Khwarazmshahs. The political tides shifted, the ruler was assassinated, and the area was conquered by the Ghaznavīs, who took prisoners, including al-Bīrūnī, to Ghaznah (modern Ghazni in Afghanistan). He served at the royal court there and was a member of the sulṭān's entourage during several military advances into India, where he learned Sanskrit and a great deal about Indian history, science, mathematics, and more. The exact date and location of his death is not certain but it must have been after 422/1050 and most likely at Ghaznah.⁸¹⁶

Over one hundred and fifty works are attributed to al-Bīrūnī. While he was a native speaker of Khwarazmian and fluent in Persian, he consciously composed his scientific writings only in the Arabic language. All he learned in India, he compiled into his *Tārīkh al-hind* (“History of India”).⁸¹⁷ He composed a treatise on Hindu philosophy,⁸¹⁸ which he compares with Greek philosophy and with Islamic Ṣūfī philosophy. He also composed works on history,⁸¹⁹ pharmacology,⁸²⁰ mineralogy,⁸²¹ mathematics,⁸²² spherical geometry,⁸²³ astronomy,⁸²⁴ and geography. His study of specific gravities made al-Bīrūnī a major source for al-Khāzinī’s *Mizān al-ḥikmah* (see #86).

It is to the Ghaznavī sulṭān Mas‘ūd ibn Maḥmūd (r. 421-432/1030-1041) that al-Bīrūnī dedicated the work for which he is most famous: his *al-Qānūn al-Mas‘ūdī* (“The Mas‘ūdī Canon”). The work is divided into eleven sections, each with numerous chapters on related subjects. After a brief introduction, the first section covers the orbits of heavenly bodies, the phenomenon of day and night on Earth, basic calendric nomenclature of various cultures and the solar and lunar calendars. The second covers the calendars of various cultures in further detail, including, Jewish, Indian, Persian, pre-Islamic Arab, and Islamic calendars, as well as others. The third section is on geometry and trigonometry, chords, arcs, and mathematical methods necessary to calculate angles and heights of the sun at various times of day. The fourth goes a step further and deals with spherical geometry, as well as horizons, zeniths, equators, and poles in the celestial sphere and latitudes of the earthly sphere. The fifth section deals with longitudes, coordinates of major cities on Earth and the direction of prayer toward Mecca (modern Saudi Arabia). The next three sections are on the sun and its orbit, the moon and its orbit and phases, and solar and lunar eclipses. The final three sections cover the celestial motions of the planets and especially their rise and set in relation to the constellations of the zodiac, as was commonly used for astrological purposes. It should be noted that al-Bīrūnī made a clear distinction between astronomy and astrology, and is well-known for his criticism of astrology as a pseudo-science, while finding it useful as a medium to teach applied mathematics.⁸²⁵

The *al-Qānūn al-Masʿūdī* was based on earlier sources, especially Ptolemy, but original contributions are evident throughout. While it is technically an astronomical work, al-Bīrūnī also includes much geographical information. In fact, his innovative use of the new Islamic trigonometry and his combination of astronomical observations and mathematical calculations in novel methods allowed him to determine coordinates on the Earth's surface with extreme accuracy.⁸²⁶ As a result of his novel methods of calculation, the tables of coordinates he lists in the fifth section were the most accurate available to cartographers at the time, and helped to depict a more accurate image of our world. In his *Chronology* he also applied similar techniques to determine with great accuracy the heights of mountains and depths of valleys. He calculated the circumference of the Earth more accurately than his predecessors, his result deviating less than eighteen kilometers from our modern scientific measurements. He also estimated the span of the Afro-Eurasian land mass and determined that the landmass constituted significantly less than half of the globe. As a result, he theorized the existence of a large landmass (later to be called the 'Americas') beyond the known oceans. And by noting the latitudinal extent of the Afro-Eurasian land-mass, he also theorized that this new landmass would be inhabited by humans at about the same latitudes.

While his contributions to geography are scattered throughout his many works on history, Indology, mathematics, and astronomy, his *al-Qānūn al-Masʿūdī* embodies much of the mathematical and scientific bases for those contributions. In 1970, a lunar impact crater on the far side of the Earth's moon was named after al-Bīrūnī, as was an associated structure in 2006.⁸²⁷ And OMB (outer main belt) asteroid #9936, discovered in 1986 by Eric Elst and Violeta Ivanova at the Rozhen Observatory in Bulgaria, has also been named in al-Bīrūnī's honor.⁸²⁸

Several editions of al-Bīrūnī's *al-Qānūn al-Masʿūdī*⁸²⁹ have been published in Arabic. While several of his other works have been translated into English and other languages, there is not yet an English language translation of the *Qānūn*. Among his other works available in

English are his history of India⁸³⁰ and a treatise on yoga psychology.⁸³¹ Also available in English translation are his other work on history,⁸³² a treatise on pharma-cology,⁸³³ an introductory astrological text,⁸³⁴ his treatise on shadows,⁸³⁵ an astronomical work on transits,⁸³⁶ and his work on geographic coordinates.⁸³⁷

YĀQŪT AL-RŪMĪ'S
MU'JAM AL-BULDĀN

(*"The Dictionary of the Realms"*)

Yāqūt (d. 626/1229, known as al-Rūmī, the Byzantine), was born in the Byzantine empire to a non-Arab family but was enslaved as a young child and taken to Baghdad at about the age of five. He later adopted the official name Ya'qūb ibn 'Abd Allāh al-Ḥamawī. The merchant who purchased the child provided for him a classical qur'ānic education and, when he was able, sent him as his envoy on business matters south to the Perisan Gulf and west to the Levant. At about age twenty, there was some disagreement between them and Yāqūt was simultaneously freed and fired from his position in the business. Fortunately, the early education provided by his former master, combined with his boundless curiosity during the travels upon which his master sent him, allowed him to take advantage of his travels to study with teachers of Arabic language, grammar, exegesis, law, theology, historiography, geography, and astronomy, to visit the libraries of notable scholars and wealthy families, and even to be engaged sometimes as a scribe and book copyist. After his freedom, all of this enabled him to earn a living as a professional copyist in Baghdad. It was in this capacity that he was able to be regularly in the company of the intelligentsia, literati, poets, bibliophiles and wealthy patrons of the capital. Whereas for his master, he traveled to the Persian Gulf island of Kish (modern Iran), Diyarbakr (modern

Turkey), and the Levant, after his freedom, he traveled to Egypt, to Aleppo and Damascus (modern Syria), Mosul (modern Iraq), Nishāpūr and Tabrīz (modern Iran), Marv and Jurjānīyah (modern Turkmenistan), and to Balkh and Herāt (modern Afghanistan). He died in the year 626/1229 at Aleppo, aged about fifty-one.⁸³⁸

The unique circles in which he traveled provided him with ample opportunity to amass the fund of knowledge necessary for the encyclopedic works he composed. Among these are several works that have not survived, including a biographical dictionary of poets, and some other works on grammar, poetry, and genealogy. He also authored a monumental biographical dictionary of literati, portions of which have survived.⁸³⁹ His occupation as a copyist means that we are fortunate to have available autograph manuscripts, a brief example of which has been published.⁸⁴⁰ Several of his geographical works have also been published, including a text compiling different geographical locations with the same names,⁸⁴¹ and a treatise on place names beginning with *dār*, *dūr*, and *dayr*.⁸⁴² Yet, Yāqūt is most famous for his *Muṣjam al-buldān* (“The Dictionary of the Realms”). It is, as the title indicates, a geographical dictionary. Place names are listed in alphabetical order rather than by region, by ‘clime,’ or by cardinal direction. Each entry begins with an explanation of the correct vocalization of the name and many entries contain much more than merely geographical information. The author included all the pertinent knowledge available to him about each location, including literary and poetic details, ethnographic details, biographies of famous associated individuals, and local mythology. It is a unique work that embodies and reflects the author’s unique knowledge base.

The *Muṣjam al-buldān* of Yāqūt is available in several Arabic editions⁸⁴³ as well as abridged versions.⁸⁴⁴ While the entire work has not yet been translated into English, a translation of the introductory chapters is available.⁸⁴⁵

ABBREVIATIONS FOR FREQUENTLY CITED SOURCES

CDSB = Complete Dictionary of Scientific Biography
[Gillispie, Charles Coulston, et al. *Complete Dictionary of Scientific Biography*. Detroit, MI: Charles Scribner's Sons, 2008.] Note:
Volumes 1-18 are the original *Dictionary of Scientific Biography* and
volumes 19-25 are the *New Dictionary of Scientific Biography*. By special
arrangement with the American Council of Learned Societies, they
have been combined to form the CDSB.

CHAL = Cambridge History of Arabic Literature
[Beeston, A. F. L. *The Cambridge History of Arabic Literature*.
Cambridge: Cambridge University Press, 1983.]

CISRL = Classical Islam: A Sourcebook of Religious Literature
[Calder, Norman, J. A. Mojaddedi, and Andrew Rippin. *Classical
Islam: A Sourcebook of Religious Literature*. Abingdon, Oxon: Routledge,
2013.]

CCAP = Cambridge Companion to Arabic Philosophy
[Adamson, Peter, and Richard C. Taylor. *The Cambridge Companion
to Arabic Philosophy*. Cambridge: Cambridge University Press, 2006.]

CHOS = Cambridge History of Science, v. 2, Medieval Science
[Lindberg, David C., and Michael H. Shank. *The Cambridge History
of Science*. Cambridge: Cambridge University Press, 2013.]

EAL = Encyclopedia of Arabic Literature
[Meisami, Julie Scott, and Paul Starkey. *Encyclopedia of Arabic
Literature*. London: Routledge, 1998.]

EALB = Essays in Arabic Literary Biography

[Allen, Roger, et al. *Essays in Arabic Literary Biography*. Wiesbaden: Harrassowitz Verlag, 2009.]

EHSTM = Encyclopaedia of the History of Science, Technology, and Medicine in Non-western Cultures

[Selin, Helaine. *Encyclopaedia of the History of Science, Technology, and Medicine in Non-western Cultures*. Dordrecht: Kluwer Academic, 1997.]

EI² = Encyclopedia of Islam, 2nd edition

[Gibb, H. A. R. *The Encyclopaedia of Islam*. Leiden: Brill, 1954.]

EIR Encyclopedia Iranica

[Yar-Shater, Ehsan. *Encyclopædia Iranica*. London: Routledge & Kegan Paul, 1983.]

ICAL = Introduction to Classical Arabic Literature

[Lichtenstadter, Ilse. *Introduction to Classical Arabic Literature: With Selections from Representative Works in English Translation*. New York: Schocken Books, 1976.]

JE = Jewish Encyclopedia

[Singer, Isidore. *Jewish Encyclopedia*. New York: Funk and Wagnalls, 1901.]

LOI = The Literature of Islam

[Skreslet, Paula Youngman, and Rebecca Skreslet. *The Literature of Islam: A Guide to the Primary Sources in English Translation*. Lanham, MD: American Theological Library Association, 2006.]

NOTES

- 1 Some exegetical works have not been included as they contributed little from a scholarly perspective, in spite of being very popular. For example, Ibn Kathīr's commentary, was and remains extremely popular in spite of (or perhaps because of?) the fact that it is extremely basic and simple.
- 2 For an excellent example of a more detailed summary, see Fred M. Donner, "The Historical Context," in *The Cambridge Companion to the Qur'ān*, ed. Jane Dammen McAuliffe (Cambridge, UK; New York: Cambridge University Press, 2006), 23-39.
- 3 See, for example: John E. Wansbrough, *Quranic Studies: Sources and Methods of Scriptural Interpretation* (Oxford: Oxford University Press, 1977); Patricia Crone and Michael Cook, *Hagarism: The Making of the Islamic World* (Cambridge: Cambridge University Press, 1977); a recent English reformulation of Günter Lüling's earlier works, including his 1974 *Über Den Ur-Qur'ān: Günter Lüling, A Challenge to Islam for Reformation: The Rediscovery and Reliable Reconstruction of a Comprehensive Pre-Islamic Christian Hymnal Hidden in the Koran Under Earliest Islamic Reinterpretations* (Delhi: Motilal Banarsidass Publishers, 2003); Arthur Jeffery, *Materials for the History of the Text of the Qur'ān: The Old Codices* (Leiden: E.J. Brill, 1937); and a recent English revision of Theodor Nöldeke's original 1860 *Geschichte Des Qorāns: Theodor Nöldeke, Friedrich Schwally, Gotthelf Bergsträsser, Otto Pretzl, and Wolfgang Behn, The history of the Qur'ān* (Leiden: Brill, 2013).
- 4 See EI 2, "al-Kur'ān;" LOI, 4-22.
- 5 See Christopher Melchert, "Ibn Mujāhid and the Establishment of Seven Qur'anic Readings," *Studia Islamica*, 91 (2000): 5-22.
- 6 EI 2, "Ibn Mudjāhid," "Kirā'a," "Ibn Miksam," and "Ibn al-Djazari."
- 7 *EI* 2, "al-Kur'ān."
- 8 A more detailed study of these less-common published Qurāns is currently under review and will hopefully be available in a forthcoming publication.

- 9 *EI* 2, “al-Ṭabarī;” EAL, 750-751; EIR, “Ṭabarī, Abū Ja’far Moḥammad b. Jarīr.”
- 10 *EI* 2, “al-Ṭabarī.”
- 11 Muḥammad ibn Jarīr al-Ṭabarī, *Tafsīr al-Ṭabarī: Jāmi‘ al-bayān ‘an ta’wīl āy al-Qur’ān*, ed. ‘Abd Allāh ibn ‘Abd al-Muḥsin Turkī (al-Riyāḍ: Dār ‘Ālam al-Kutub lil-Ṭibā’ah wa-al-Nashr wa-al-Tawzī’, 2003). See also an older Egyptian edition: *Tafsīr al-Ṭabarī: Jāmi‘ al-bayān ‘an ta’wīl al-Qur’ān* (al-Qāhirah: Dār al-Ma’ārif, 1955).
- 12 ICAL, 259-263; LOI, 58-60; An excellent English language abridgement has been published, but only the first volume is available: Muḥammad ibn Jarīr al-Ṭabarī, *The commentary on the Qur’ān. Volume I*, ed. John Cooper, Wilferd Madelung, and Alan Jones (Oxford: Oxford University Press, 1987); CISRL, 164-167; Helmut Gätje, *The Qur’ān and Its Exegesis: Selected Texts with Classical and Modern Muslim Interpretations* (Berkeley: University of California Press, 1976), 65, 92-99, 123-125, 156-162, and 183-186. Selected portions have also been incorporated into another English source which, unfortunately, does not indicate precisely which portions are from al-Ṭabarī. However, it remains useful for the English language reader, as it provides English translations of some *ḥadīths* quoted by al-Ṭabarī in their respective exegetical categories. See: Taqī al-Dīn Hilālī, Muhammad Mushin Khan, and Abdul Malik Mujahid, *Tafsīr ma’ānī al-Qur’ān al-Karīm bi-al-lughah al-Injilīziyyah: Interpretation of the Meanings of the Noble Qur’ān in English Language with Comments from Tafsīr at-Tabarī, Tafsīr al-Qurtubī, and Tafsīr Ibn Kathīr and Ahadith from Sahih al-Bukhari, Sahih Muslim and Other Ahadith Books* (Riyadh: Darussalam, 2000). For an earlier, one volume summary, see: Taqī al-Dīn Hilālī and Muhammad Mushin Khan, *Interpretation of the Meanings of the Noble Qur’ān in the English Language: A Summarized Version of At-Tabarī, Al-Qurtubī, and Ibn Kathīr with Comments from Sahih-Al-Bukhari* (Riyadh, Saudi Arabia: Maktaba Dar-us-Salam, 1994).
- 13 *EI* 2, “al-Ṭūsī.”
- 14 Ibid.
- 15 Muḥammad ibn al-Ḥasan Ṭūsī *al-Tibyān fī tafsīr al-Qur’ān* (al-Najaf: al-Maṭba’ah al-‘Ilmīyah, 1959).
- 16 *EI* 2, “al-Zamakhsharī;” EAL, 820-821.
- 17 *EI* 2, “al-Zamakhsharī.”

- 18 For a more recent Saudi edition, see: Maḥmūd ibn ‘Umar al-Zamakhsharī, *al-Kashshāf ‘an ḥaqā’iq ghawāmiḍ al-tanzīl wa-ḥyūn al-aqāwīl fī wujūh al-ta’wīl*, ed. ‘Ādil Aḥmad ‘Abd al-Mawjūd, and ‘Alī Muḥammad Mu‘awwad, (al-Riyāḍ: Maktabat al-‘Ubaykān, 1998). For an older Egyptian edition, see: *al-Kashshāf ‘an ḥaqā’iq al-tanzīl wa-ḥyūn al-aqāwīl fī wujūh al-ta’wīl*, ed. ‘Alī ibn Muḥammad Jurjānī, Aḥmad ibn Muḥammad Ibn al-Munayyir, and al-Ḥamawī Muḥibb al-Dīn Muḥammad ibn Abī Bakr (Miṣr: al-Bābī al-Ḥalabī, 1966). For an older Beirut edition, see: *al-Kashshāf ‘an ḥaqā’iq ghawāmiḍ al-tanzīl wa-ḥyūn al-aqāwīl fī wujūh al-ta’wīl: wa-huwa tafsīr al-Qur’ān al-karīm*, ed. Aḥmad ibn Muḥammad Munayyir, Aḥmad ibn ‘Alī Ibn Hajar al-‘Aswalānī, and Muḥammad ‘Ilyān Marzuqī (Bayrūt: Dār al-Kitāb al-‘Arabī, 1947).
- 19 CISRL, 168-169; LOI, 60-61; Kenneth Cragg, *The Mind of the Qur’ān: Chapters in Reflection* (London: Allen and Unwin, 1973), 65-69. Numerous translated selections are also interspersed throughout Gätje, *The Qur’ān and Its Exegesis*.
- 20 Andrew J. Lane, *A Traditional Mu’tazilite Qur’ān Commentary: The Kashshāf of Jār Allāh Al-Zamakhsharī* (d. 538/1144) (Leiden; Boston: Brill, 2006).
- 21 *EI* 2, “al-Ṭabrisī.”
- 22 For the most recent Qum edition, see: al-Faḍl ibn al-Ḥasan al-Ṭabarsī, *Majma‘ al-bayān li-ṭulūm al-Qur’ān* (Qum: Manshūrāt Maktabat Āyat Allāh al-‘Uẓmā al-Mar‘ashī al-Najafī, 1982). For an earlier Cairo edition, see: *Majma‘ al-bayān li-ṭulūm al-Qur’ān* (al-Qāhirah: Dār al-Taqrīb Bayna al-Madhāhib al-Islāmīyah, 1958). For an earlier Beirut edition, see: *Majma‘ al-bayān fī tafsīr al-Qur’ān* (Bayrūt: Dār al-Fikr, 1954). For an early Ṣaydā edition, see: *Majma‘ al-bayān fī tafsīr al-Qur’ān* (Ṣaydā: Maṭba‘at al-‘Irfān, 1914).
- 23 See also LOI, 65-66.
- 24 *EI* 2, “al-Rāzī.”
- 25 *EI* 2, “al-Rāzī;” EAL, 217.
- 26 Fakhr al-Dīn Rāzī, *al-Tafsīr al-kabīr*, aw, mafatīḥ al-ghayb: lil-Imām Fakhr al-Dīn Muḥammad Ibn ‘Umar Ibn al-Ḥusayn Ibn Ḥasan Ibn ‘Alī al-Tamīmī al-Bakrī al-Rāzī al-Shāfi‘ī, ed. Ibrāhīm Shams al-Dīn and Ahmad Shamsuddin (Bayrūt: Dār al-Kutub al-‘Ilmīyah, 1992). See also an

- older Beirut edition: al-Tafsīr al-kabīr (Bayrūt: Dār Ihya' al-Turāth al-'Arabī, 1980). See also an older Cairo edition: al-Tafsīr al-kabīr (Miṣr: al-Maṭba'ah al-Bahīyah al-Miṣriyah, 1934).
- 27 CISRL, 176-182; LOI, 61-62; Cragg, *The Mind of the Qur'ān*, 56-62; Gätje, *The Qur'ān and Its Exegesis*, 198-209.
 - 28 See: Rahbar, *Indices*. Another index is available with introductory material in French and Arabic index: Michel Lagarde, *Index du Grand commentaire de Faḥr al-Dīn al-Rāzī* (New York: E.J. Brill, 1996).
 - 29 Not to be confused with Qāzī Abū Bakr Ibn al-'Arabī (d. 453/1148).
 - 30 CHAL, 5:331-344; EAL, 311-312; EALB, 94-115; EHSTM, 1086-1087; *EI* 2, "Ibn al-'Arabī;" *EIR*, "Ebn al-'Arabī."
 - 31 *EI* 2, "Ibn al-'Arabī."
 - 32 Ibn al-'Arabī, *Tafsīr al-Qur'ān al-karīm* (Bayrūt: Dār al-Thaqāfah al-'Arabīyah, 1968); *Tafsīr Muḥyī al-Dīn ibn al-'Arabī* (Egypt: Maṭba'at Bulāq, 1876).
 - 33 LOI, 182-185; Denis McAuley, "Ibn 'Arabī (d. 637/1240) and the Qur'an: A Series of Poems," in *The Qur'an and Adab*, 381-400.
 - 34 *EI* 2, "al-Ḳurṭubī."
 - 35 Ibid.
 - 36 See also an older edition: Muḥammad ibn Aḥmad al-Qurṭubī, *Tafsīr al-Qurṭubī: al-jāmi' li-aḥkām al-Qur'an* (al-Qāhirah: Dār wa-Maṭabī' al-Sha'b, 1961).
 - 37 Unfortunately, there are no citations indicating precisely which portions of this text are from al-Qurṭubī. However, it provides English translations of some *ḥadīths* quoted by al-Qurṭubī in their respective exegetical categories, which may prove useful to the English reader. See: Hilālī et al., *Tafsīr ma'ānī al-Qur'ān al-Karīm*, and Hilālī et al., *Interpretation of the Meanings of the Noble Qur'an*.
 - 38 *EI* 2, "Mālik b. Anas;" *EAL*, 500.
 - 39 *EI* 2, "Mālik b. Anas."
 - 40 Mālik ibn Anas, *al-Muwatta'*, ed. Fu'ād 'Abd al-Bāqī (Cairo: Dār Ihya' al-Kutub al-'Arabīyah, 'Isā al-Bābī al-Ḥalabī, 1980); *al-Muwatta'* (Cairo: Dār Ihya' al-Kutub al-'Arabīyah, 1951).

- 41 For complete English translations see: Mālik ibn Anas, *The Muwatta of Imam Muhammad: The Muwatta of Imam Malik Ibn Anas in the Narration of Imam Muhammad Ibn al-Hasan ash-Shaybani*, ed. Muḥammad ibn al-Ḥasan Shaybānī (London: Turath, 2004); Al-Muwatta of Imam Malik Ibn Anas: *The First Formulation of Islamic Law*. (New York: Kegan Paul International, 1989); Muwatta' Imam Malik, ed. Muhammad Rahimuddin (Lahore, Pakistan: Sh. Muhammad Ashraf, 1980). See also LOI, 27-29.
- 42 Umar F. Abd-Allah, Mālik and Medina: *Islamic Legal Reasoning in the Formative Period* (Leiden: Brill, 2013); Yasin Dutton, *The Origins of Islamic Law: The Qur'an, the Muwaṭṭa' and Madinan 'Amal* (London: Routledge Curzon, 2002).
- 43 EI 2, "al-Bukhārī, Muḥammad b. Ismā'īl;" EAL, 162.
- 44 Muḥammad ibn Ismā'īl al-Bukhārī, *Ṣaḥīḥ al-Bukhārī: bi-ikhtilāf al-rivāyāt* (al-Qāhirah: Wizārat al-Awqāf, al-Majlis al-A'lā lil-Shu'ūn al-Islāmīyah, Lajnat Ihya' Kutub al-Sunnah, 2005); *Ṣaḥīḥ Al-Bukhārī*, ed. Abū Ṣuhayb Karamī (al-Riyāḍ: Bayt al-Afkār al-Dawliyah lil-Nashr, 1998); *Ṣaḥīḥ al-Bukhārī* (al-Qāhirah: al-Majlis al-A'lā lil-Shu'ūn al-Islāmīyah, Lajnat Ihya' Kutub al-Sunnah, 1966).
- 45 See LOI, 31-33; Muḥammad ibn Ismā'īl al-Bukhārī, *The Translation of the Meanings of Sahih al-Bukhari*, ed. Muhammad Muhsin Khan (Medina: al-Munawwara Islamic University, 1971); *Ṣaḥīḥ al-Bukhārī: Being Traditions of the Sayings and Doings of the Prophet Muhammad* (Lahore: Arafat Publications, 1938). Also available is a publication of selected ḥadīths only, not including chains of transmission: Thomas F. Cleary, et al., *The Wisdom of the Prophet: Sayings of Muhammad* (Boston: Shambhala, 2001). The ḥadīths that are common to both the collection of al-Bukhārī and that of Muslim have been collected in an original Arabic text, the English translation of which is available: Muḥammad Fu'ād 'Abd al-Baqī, et al., *al-Lu'lu' wal-marjān fi mā ittafaqā 'alayhi al-shaykhān: The Translation of the Meanings of Al-Lu'lu' wal-Marjan, Arabic-English, a Collection of Agreed Upon Ahadith from Al-Bukhari and Muslim* (al-Riyāḍ: Maktabat Dār al-Salām, 1995). See also an excerpt translated in ICAL, 257-258.
- 46 Jonathan A. C. Brown, *The Canonization of Al-Bukhārī and Muslim: The Formation and Function of the Sunnī Ḥadīth Canon* (Leiden: Brill, 2007); Ghassan Abdul-Jabbar, *Bukhari* (New York: Oxford University Press, 2007).
- 47 EI 2, "Muslim b. al-Ḥadīdjādī;" EAL, 556-557.

- 48 Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ Muslim*, ed. Khalīl Ma'mūn Shīḥā (Bayrūt, Lubnān: Dār al-Ma'rīfah, 1994). See also an excellent older edition: Muslim, *Ṣaḥīḥ Muslim*, ed. Muḥammad Fu'ād 'Abd al-Baqī (Bayrūt: Dār Iḥyā' al-Turāth, 1956).
- 49 For an English translation including the original Arabic, see: Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ Muslim: The Authentic Hadiths of Muslim, with Full Arabic Text*, ed. Muḥammad Mahdī Sharīf (Bayrūt: Dār al-Kutub al-'Ilmiyah, 2012); *Ṣaḥīḥ Muslim: Being Traditions of the Sayings and Doings of the Prophet Muḥammad as Narrated by His Companions and Compiled Under the Title al-Jāmi' uṣ-ṣaḥīḥ*, ed. Abdul Hameed Siddiqui (New Delhi: Kitab Bhavan, 1977); see also LOI, 33-36.
- 50 G.H.A. Juynboll, "Muslim's Introduction to his *Ṣaḥīḥ*, Translated and Annotated with an Excursus," *Jerusalem Studies in Arabic and Islam*, 6 (1984), 263-311.
- 51 Muslim ibn al-Ḥajjāj, *Ṣaḥīḥ Muslim: Abridged*, ed. Aftab Shahryar (New Delhi: Islamic Book Service, 2004); Mukhtaṣar Ṣaḥīḥ Muslim: The Translation of the Meaning of the Summarized Saḥīḥ Muslim: Arabic-English, ed. 'Abd al-'Azīm ibn 'Abd al-Qawī Mundhirī (Riyad: Darussalam, 2000).
- 52 'Abd al-Baqī, Translation of the Meanings of Al-Lu'lu'wal-Marjan.
- 53 Brown, Canonization of Al-Bukhārī and Muslim. For a biography of Muslim see: Ibn 'Abdul-Maujood, et al., *The Biography of Imām Muslim Bin Al-Ḥajjāj: The Author of Saḥīḥ Muslim (d. 261 H)* (Riyadh: Darussalam, 2007).
- 54 EI 2, "al-Kulaynī (or al-Kulīnī), Abū Dja'far Muḥammad;" EIR, "Kolayni."
- 55 Al-Kulīnī, *al-Uṣūl min al-kāfi*, ed. 'Alī Akbar al-Ghaffārī (Tehran: Dār al-Kutub al-Islāmiyyah, 1968), 1:8.
- 56 EI 2, "al-Kulaynī."
- 57 Publications sometimes divide the work into its relevant sections on *uṣūl* and those on *furū'*. For *uṣūl*, see: Kulaynī, *al-Uṣūl min al-kāfi*, ed. 'Alī Akbar Ghaffārī. For *furū'*, see: *Furū' al-kāfi* (Bayrūt: Manshūrāt Mu'assasat al-'Alamī lil-Maṭbū'āt, 2005). A compilation of the entire collection of the four canonical Shī'ī works is also available: Mājīd Naṣīr Zubaydī, *al-Jāmi' lil-kutub al-arba'ah* (Bayrūt: Dār al-Maḥajjah al-Bayḍā' lil-Tibā'ah wa-al-Nashr wa-al-Tawzī', 2014).

- 58 Kulaynī, *al-Kāfī*, ed. Muḥammad Riḍā Jaʿfarī (Tehran: Khurasan Islamic Research Centre, 1978); see also LOI, 45-47.
- 59 CISRL, 82-85.
- 60 Andrew J. Newman, *The Formative Period of Twelver Shīʿism: Ḥadīth As Discourse between Qum and Baghdad* (Richmond, Surrey: Curzon, 2000); and “Between Qumm and the West: The Occultation According to al-Kulaynī and al-Kātib al-Nuʿmānī,” in *Culture and Memory in Medieval Islam: Essays in Honour of Wilferd Madelung*, ed. Josef W. Meri and Farhad Daftari (London: I.B. Tauris, 2003), 94-108.
- 61 *EI* 2, “Ibn Babawayh (I);” EIR, “Ebn Bābawayh (2).”
- 62 Ibn Bābawayh al-Qummī, *Man lā yaḥḍuruḥu al-faqīh*, ed. Muḥammad ibn ʿAlī, et al. (Bayrūt: Dār al-Aḍwā, 1992); and an older edition: *Man lā yaḥḍuruḥu al-faqīh*, ed. Muḥammad ibn ʿAlī (s.l.: s.n., 1957). See also the entire collection of the four canonical Shīʿī works compiled by Zubaydi, *al-Jāmiʿ lil-kutub al-arbaʿah*.
- 63 CISRL, 71-73.
- 64 Not to be confused with Muḥammad ibn Saʿd al-ʿAwfī, frequently cited by al-Ṭabarī in his *Commentary*.
- 65 *EI* 2, “Ibn Saʿd;” EAL, 366-367.
- 66 Muḥammad Ibn Saʿd, *Kūtab al-tabaqat al-kabir*, ed. ʿAlī Muḥammad ʿUmar (al-Qāhirah: Maktabat al-Khānjī, 2001); *al-Tabaqāt al-kubrā* (Beirut: Dār Sādir and Dār Bayrūt, 1960). A condensed edition has also been published: *al-Ṭabaqāt al-ṣaghīr*, ed. Bashshār ʿAwwād Maʿrūf, and Muḥammad Zāhid Jūl (Bayrūt: Dār al-Gharb al-Islāmī, 2009).
- 67 For volumes one and two, see: S. Moninul Haq, *Ibn Saʿd’s Kūtab Al-Tabaqat Al-Kabir Vols. 1&2* (Karachi: Pakistan Historical Society, 1967, 1972; for volumes three, six, seven, and eight, see: Aisha Bewley, *Muhammad Ibn Saʿd’s Kūtab Al-Tabaqat Al-Kabir* (TaHa Publications, Ltd., UK, 2012). See also LOI, 107-109; CISRL, 44-49.
- 68 Ibn Abī Ḥatīm al-Rāzī, *al-Jarḥ wa-al-taʿdīl*, ed., ʿAbd al-Raḥmān ibn Yaḥyā al-Muʿallimī al-Yamānī (Hyderabad, India: Majlisi Dāʿirat al-Maʿārif al-ʿUthmānīyah, 1952), *dāl-hāʾ*.
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- 72 Ibn Abī Ḥatīm al-Rāzī, *Muqaddimat Ibn Abī Ḥatīm al-Rāzī*, ed. ʿAbd al-Raḥmān ibn Muḥammad and Mājīd Muḥammad ʿAbduḥ Dalālaʾah (ʿAmmān: Dār al-Quṭūf lil-Nashr wa-al-Tawzīʿ, 2011). See also an older edition corresponding to the introduction in the complete 1952 edition cited previously: *Taqdimah li-kitāb al-jarḥ wa-al-taʿdīl*, ed. ʿAbd al-Raḥmān ibn Muḥammad (Ḥaydarābād, India: Maṭbaʿat Majlis Dāʿirat al-Maʿārif al-Uthmāniyyah, 1952).
- 73 Eerik Dickinson, *The Development of Early Sunnite Hadīth Criticism: The Taqdimah of Ibn Abī Ḥatīm Al-Rāzī (240/854-327/938)* (Leiden: Brill, 2001).
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- 75 ʿAbd Allāh ibn Aḥmad al-Kaʿbī al-Balkhī, *Qubūl al-akḥbār wa-maʿrifat al-rijāl*, ed. Abī ʿAmr al-Ḥusaynī ibn ʿUmar ibn ʿAbd al-Raḥīm, (Beirut: Dār al-Kutub al-ʿIlmiyyah, 2000), 1:15.
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- 112 CCAP, 137-154; CHAL, 3:424-445; EAL, 252-253; *EI* 2: “al-Ghazālī;” EIR, “Ġazālī, Abū Ḥāmed Moḥammad.”
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- 145 Not to be confused with another Ṣūfī, Shihāb al-Dīn Yaḥyā al-Suhrawardī, the famous *Shaykh al-Ishrāq* (Master of Illumination), who was sentenced to death in 587/1191 on the orders of Ṣalāḥ al-Dīn (Saladin) al-Ayyūbī.
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- 172 Muḥammad Ibn Rushd, *The Distinguished Jurist's Primer: Bidayat al-mujtahid*, ed. Imran Ahsan Khan Nyazee (Reading: Garnet, 2000).
- 173 Muḥammad ibn al-Ḥasan al-Ṭūsī, *al-Khilāf* (Qum: Mu'assasat al-Nashr al-Islāmī al-Tābi'ah li-Jamā'at al-Mudarrisin bi-Qum al-Musharrafah, 1987).
- 174 Al-Ṭūsī, *al-Khilāf*, 1:598-600.
- 175 Al-Ṭūsī, *al-Khilāf*; About a century after al-Ṭūsī, another scholar on our list, al-Ṭabrisī (see #6) made an abridgement: al-Ṭūsī and al-Faḍl ibn al-Ḥasan Ṭabarsī, *al-Muḥallaf min al-mukhtalif bayna a'immah al-salaf wa-huwa muntakhab al-khilāf*, ed. Mahdī Rajā'ī (Mashhad, Īrān: Majma' al-Buḥūth al-Islāmīyah, 1989); There is also an even more condensed version from this past century: al-Ṭūsī, *Masā'il hāmmah min kitāb al-khilāf* (Tehran: Dānishgāh-i Tihān, 1925).
- 176 R. Kevin Jaques, *Authority, Conflict, and the Transmission of Diversity in Medieval Islamic Law* (Leiden: Brill, 2006).
- 177 'Alī ibn Aḥmad Ibn Ḥazm, *Ṭawq al-ḥamāmah fī al-ulfah wa-al-ullāf*, ed. Ṣalāḥ al-Dīn Qāsimī (Baghdād: Dār al-Shu'ūn al-Thaqāfiyyah al-'Āmmah, 1986).
- 178 CHAL, 5:237-251; EAL, 333; EALB, 150-167; *EI* 2, "Ibn Ḥazm;" ELTB, 687-688.
- 179 Ibn Ḥazm, *Ṭawq al-ḥamāmah fī al-ulfah wa-al-ullāf*, ed. Qāsimī. See also Lois Griffin, "Ibn Ḥazm and the *Ṭawq al-Ḥamāma*," in *The Legacy of Muslim Spain*, 420-422.
- 180 'Alī ibn Aḥmad Ibn Ḥazm, *Al-Muḥallā bi al-āthār*, ed. 'Abd al-Ghaffār Sulaymān Bindārī (Bayrūt: Dār al-Kutub al-'Ilmīyah, 1988); *al-Muḥallā*, ed. Aḥmad Muḥammad Shākir (Beirut: al-Maktab al-Tijārī lil-Ṭibā'ah wa-al-Nashr, 1969); *al-Muḥallā* (Miṣr: Maṭba'ah al-Imām, 1964).
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- 182 *EI* 2, "Ibn Ḥazm."

- 183 'Alī ibn Aḥmad Ibn Ḥazm, *al-Fiṣal fī al-mīlāl wa-al-ahwā' wa-al-niḥāl*, ed. Aḥmad Shams al-Dīn (Bayrūt: Dār al-Kutub al-'Ilmiyah, 1996); *al-Fiṣal*, ed. Shahrīstānī; *Kitāb al-fiṣal fī al-mīlāl wa-al-ahwā' wa-al-niḥāl*, ed. Muḥammad ibn 'Abd al-Karīm Shahrīstānī (Cairo: al-Maṭba'ah al-adabīyah, 1899).
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- 254 CISRL, 203-204.
- 255 Not to be confused with Abū al-Faḍl Muḥammad ibn Ḥusayn al-Bayhaqī (d. 469/1077), the author of the famous history, *Tārīkh-e Bayhaqī*; or with 'Alī ibn Zayd al-Bayhaqī (d. 565/1169-70), the literary and scientific polymath.
- 256 EAL, 145; *EI* 2, "al-Bayhaqī;" EIR, "Bayhaqī, Ebrāhīm," III:8, 895.
- 257 Jāhīz, *al-Maḥāsīn wa-al-aḍḍād*, ed. Yūsuf Farḥāt (Bayrūt: Dār al-Jīl, 1997).
- 258 Ibrāhīm ibn Muḥammad al-Bayhaqī, *al-Maḥāsīn wa-al-masāwī* (al-Riṣāḥ: Dār al-Ṣumay'ī lil-Nashr wa-al-Tawzī', 2010); *al-Maḥāsīn wa-al-masāwī* (Bayrūt: Dār Sādir, 1960); *Kūtab al-maḥāsīn wa-al-masāwī*, ed. Friedrich Schwally (Giessen: J. Ricker, 1902).
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- 562 CDSB, 9:40-41; EAL, 497-498; *EI* 2, Elgood, C., “Alī b. al-‘Abbās.”
- 563 *EI* 2, “Alī b. al-‘Abbās.”
- 564 In this he was preceded by Aḥmad ibn Sahl al-Balkhī (d. 327/934), a student of al-Kindī (see #69), who was the first to discuss concepts of mental health and mental hygiene in Islamic medicine. He was highly critical of physicians who minimized or ignored altogether the role of mental health in medicine and these concepts no doubt had an effect on our author, al-Majūsī. See: Aḥmad ibn Sahl al-Balkhī, *Maṣāliḥ al-abdān wa-al-anfus*, ed. Maḥmūd Miṣrī and Muḥammad Haytham Khayyāt (al-Qāhirah: Maḥad al-Makhṭūṭāt al-‘Arabīyah, 2005). See also an earlier edition: *Maṣāliḥ al-abdān wa-al-anfus*, ed. Mālik Badrī and Muṣṭafā ‘Ashwī (al-Riyāḍ: Markaz al-Malik Fayṣal lil-Buḥūth wa-al-Dirāsāt al-Islāmiyah, 2003).
- 565 See tale of “The Doctor of Physic” in any of the numerous published editions.

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- 569 Sami Khalaf Hamarneh and Glenn Sonnedeker, A Pharmaceutical View of Abulcasis Al-Zahrāwī in Moorish Spain: With Special Reference to the “Ad’hān,” (Leiden: E.J. Brill, 1963), 21.
- 570 *EI* 2, “al-Zahrāwī.”
- 571 Hamarneh and Sonnedeker, *A Pharmaceutical View*, 22.
- 572 CDSB, 14:584-585; *EI* 2, Emilie Savage-Smith, “al-Zahrāwī.”
- 573 Khalaf ibn ‘Abbās al-Zahrāwī, *Albucasis on Surgery and Instruments*, ed. M. S. Spink and G. L. Lewis (Berkeley: University of California Press, 1973), viii-ix.
- 574 al-Zahrāwī, *Albucasis on Surgery*, ed. Spink and Lewis, ix.
- 575 Ibid.
- 576 *EI* 2, “al-Zahrāwī.”
- 577 Khalaf ibn ‘Abbās al-Zahrāwī, *al-Taṣrīf li-man ‘ijaza ‘an al-ta’līf: al-maqālāh al-thalāthūn fī al-‘amal bi-al-yad, al-kayy wa-al-jirāḥah wa-jabr al-‘izām*, ed. Muṣṭafā Mūsā and Samāḥ Sāmī (al-Qāhirah: al-Hay’ah al-Miṣrīyah al-‘Ammah lil-Kitāb, 2016); *Kitāb al-Zahrāwī fī al-ṭibb li-‘amal al-jarāḥīn: wa-huwa al-maqālāh al-thalāthūn min al-taṣrīf li-man ‘ijaza ‘an al-ta’līf, al-‘amal bi-al-yad*, ed. Muḥammad Yāsir Zakkūr (Dimashq: Wizārat al-Thaqāfah, 2009); *al-Jirāḥah: al-maqālāh al-thalāthūn min al-mawṣū’ah al-ṭibbīyah al-taṣrīf li-man ‘ijaza ‘an al-ta’līf*, ed. ‘Abd al-‘Azīz Naṣīr al-Nāṣir and ‘Alī Sulaymān Tuwayjirī (Riyad: Maṭābi‘ al-Farazdaq, 1993).
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- 606 *EI* 2, “Iṣḥāq b. Sulaymān al-Isrā’īlī.”
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- 640 The test is in the original Arabic, with a French introduction. See: ʿAlī ibn ʿAbd al-Raḥmān Ibn Hudhayl, *L'ornement des âmes et la devise des habitants d'el Andalus, Traité de Guerre sainte islamique*, ed. Louis Charles Emile Mercier (Paris: P. Geuthner, 1936).
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